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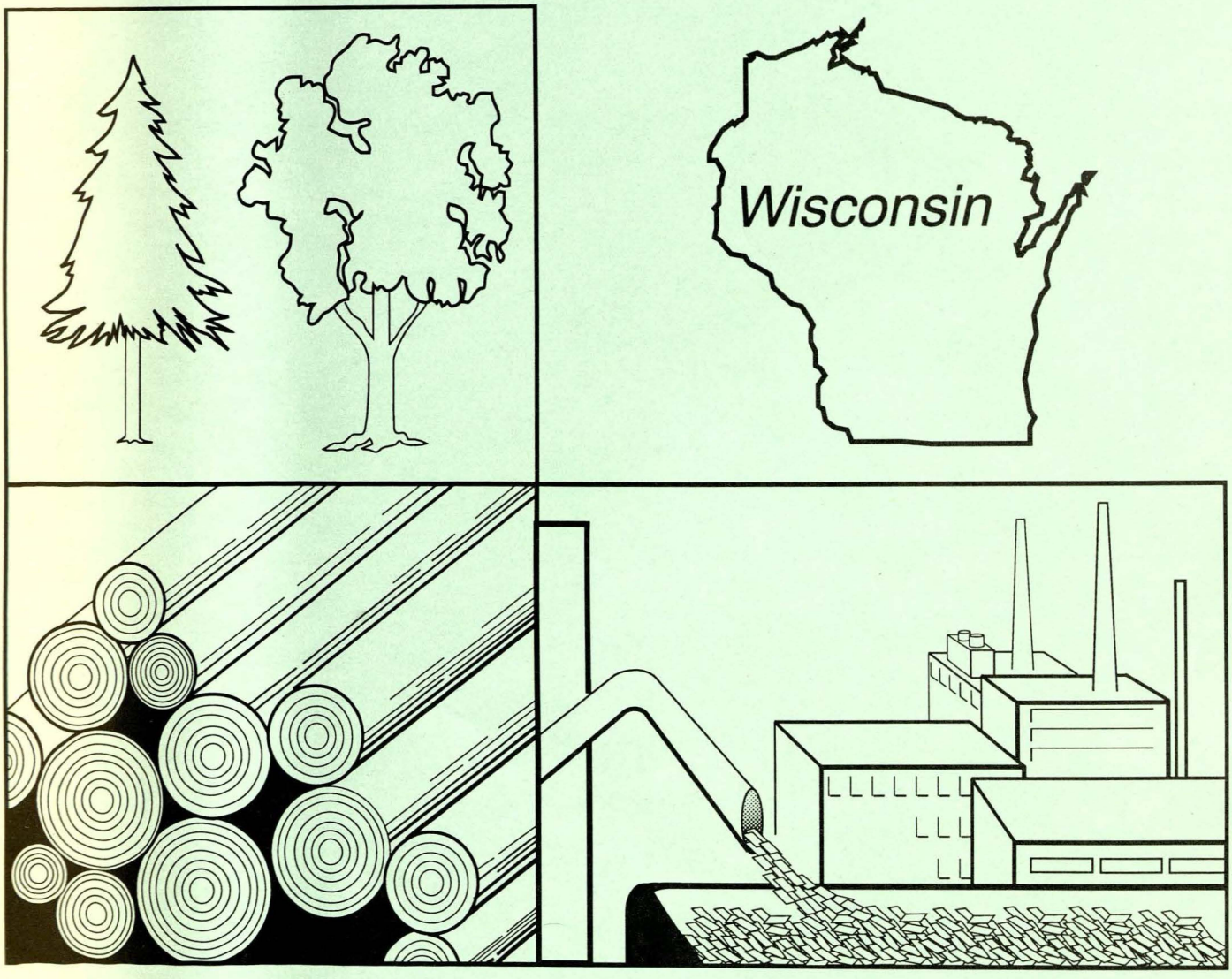
Wisconsin Timber Industry - An Assessment of Timber Product Output and Use, 1994

Ronald L. Hackett and James W. Whipple



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FOREWORD

In this bulletin we discuss recent Wisconsin forest industry trends and report the results of a detailed study of forest industry, industrial roundwood production, and associated primary mill wood and bark residue in Wisconsin in 1994. Such detailed information is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, and forest industry development. Likewise, researchers need current forest industry and industrial roundwood information for planning projects.

Special thanks are given to the primary wood-using firms for supplying information for this study and to the Wisconsin Department of Natural Resources for canvassing the respondents. Their cooperation is greatly appreciated.

All board foot data in this report have been converted to International 1/4-inch scale by applying a multiplier of 1.08 to all saw-log volume reported in Scribner Decimal C scale by sawmills, a multiplier of 1.04 to all veneer-log volume reported in Scribner Decimal C scale by veneer mills, a multiplier of 1.38 to all saw-log volume reported in Doyle scale by sawmills, and a multiplier of 1.14 to all veneer-log volume reported in Doyle scale by veneer mills.

The last published report from a detailed study of all industrial roundwood output in Wisconsin was in 1992. Most comparisons in this report are with the 1992 study results. Row and column data of tables may not sum due to rounding, but data in each table cell are accurately displayed.

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Wisconsin Timber Industry—An Assessment of Timber Product Output and Use, 1994

Ronald L. Hackett and James W. Whipple

HIGHLIGHTS

PRIMARY TIMBER INDUSTRY—INDUSTRIAL ROUNDWOOD

- In 1994, Wisconsin's primary wood-using industry was comprised of 330 mills, not including 103 sawmills that each processed less than 50 thousand board feet in 1994 (table 1).
- Most of the State's primary wood-using mills are located in the three most northern Forest Survey Units (figs. 1 and 2).
- Between 1992 and 1994, Wisconsin's primary wood-using industry increased by 19 mills, most of which were sawmills.
- In 1994, Wisconsin's primary wood-using industry processed 396 million cubic feet of roundwood—a slightly more than 7-percent increase since 1992 (table 2).
- Wisconsin's 21 pulp mills processed more than 261 million cubic feet of roundwood in 1994, an increase of more than 4 percent from 1992. Pulpwood produced in 1994 was more than twice that processed by the numerous sawmills and accounted for 65 percent of all roundwood processed.
- Hardwoods made up 3 out of every 4 cubic feet of roundwood processed by the State's primary wood-using industry in 1994.
- In 1994, 377.6 million cubic feet of industrial roundwood was harvested from Wisconsin's forest—a 6-percent increase from 1992 (table 3). Both softwoods and hardwoods increased by an average of 6 percent during this time period.
- The increase in softwood production was associated with the increased use of jack pine for pulpwood and saw logs as well as the increased use of red and white pine for saw logs.
- The increase in hardwood production was associated with the increased use of aspen for saw logs and the increased use of hard maple for pulpwood.
- Pulpwood remained the predominant roundwood product harvested from Wisconsin's forests (fig. 3).
- The State's industrial roundwood production was concentrated in the Northeast and Northwest Units, which together provided 70 percent of the State's 1994 production. The Central Unit provided another 20 percent of the industrial roundwood (fig. 4).
- Nearly all the industrial fuelwood and close to three-quarters of the pulpwood and veneer-log production came from the Northeast and Northwest Units combined. These two units also provided more than 50 percent of the saw-log production in the State.

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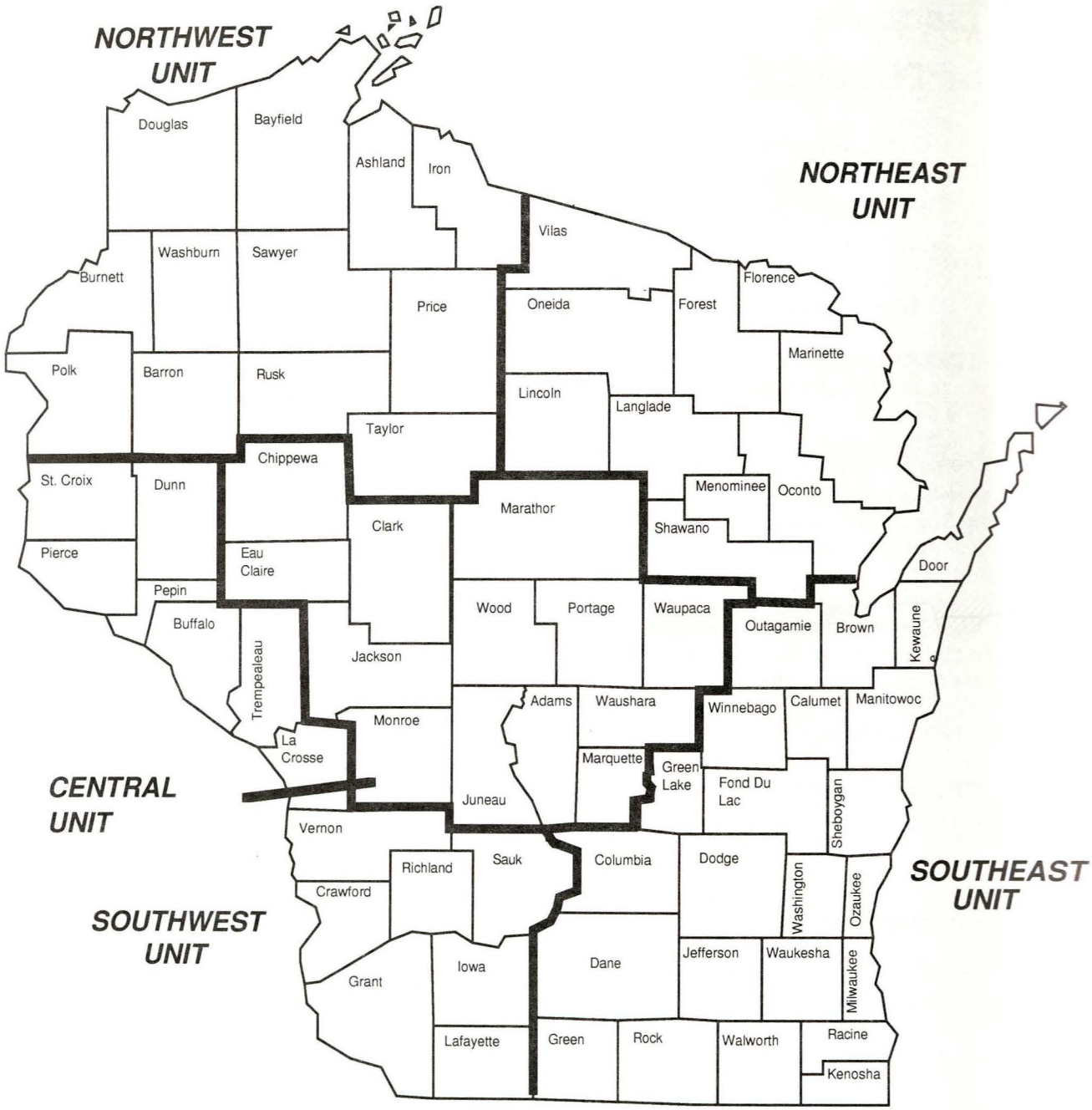

Figure 1.—*Forest Survey Units in Wisconsin.*

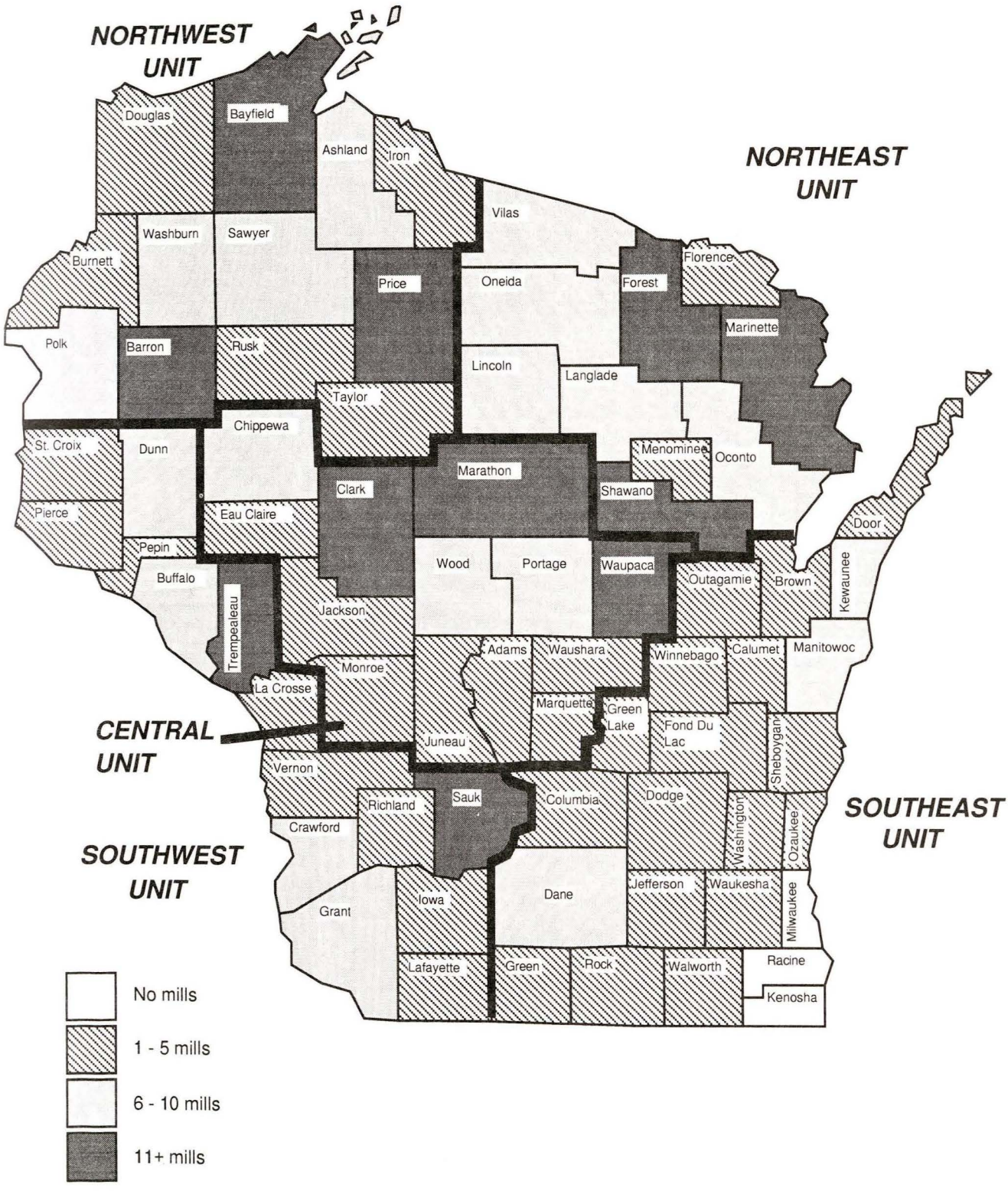

Figure 2.—*Number of primary wood-using mills by county, Wisconsin, 1994.*

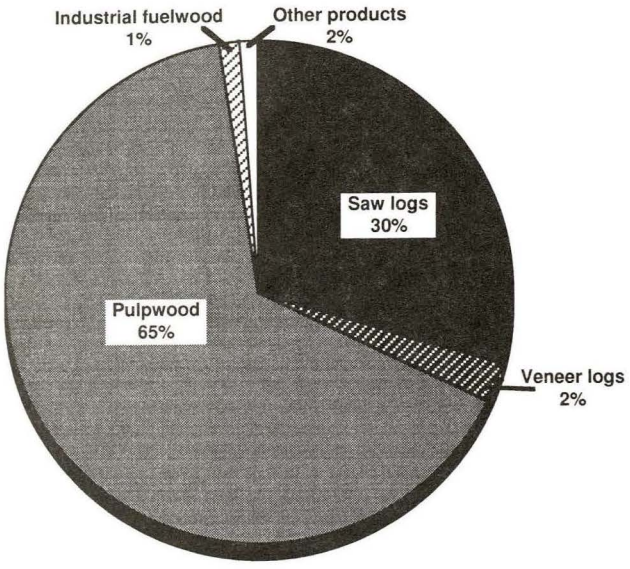

Figure 3.—*Distribution of industrial roundwood production by product, Wisconsin, 1994.*

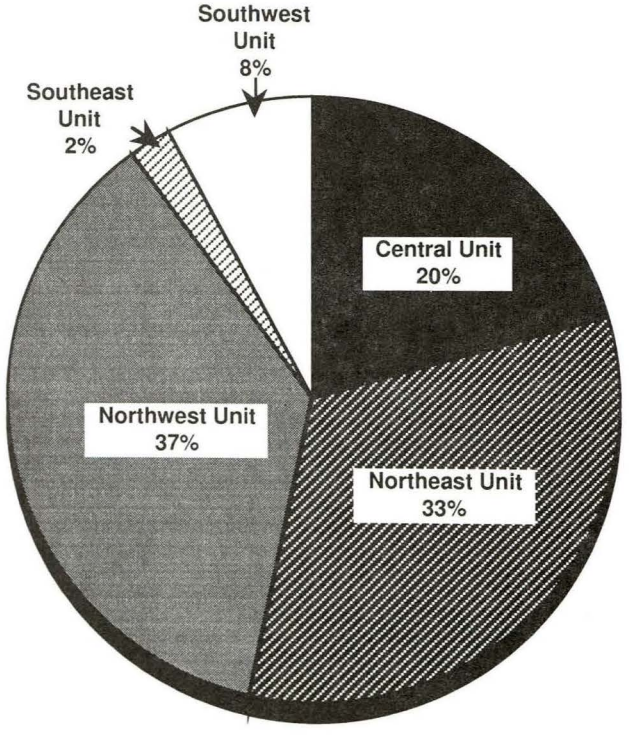

Figure 4.—*Distribution of industrial roundwood production by Forest Survey Unit, Wisconsin, 1994.*

PULPWOOD

- Wisconsin's pulpwood production (including both roundwood and mill residues generated by the State's other primary wood-using industries) has been steadily increasing over time, and has stayed around the 3 million cord level for the past 7 years (table 4, fig. 5).

- In 1994, pulpwood production in Wisconsin totaled 3.5 million cords, a 5-percent increase from 1992. Much of the increase was concentrated in pine and other hardwoods.

- Roundwood supplied 90 percent of the pulpwood produced in 1994, and aspen supplied a little over one-third of the roundwood.

- Wisconsin's pulpwood and particleboard mills consumed 92 percent of the State's production of pulpwood (table 5). The remainder was shipped out of State for processing, mainly to Michigan.

- Aspen was the major species exported.

- The Northwest Unit provided 42 percent of the roundwood pulpwood harvested in the State in 1994 (table 6).

- Four counties—Oneida, Bayfield, Douglas, and Iron—each reported more than 150 thousand cords of roundwood pulpwood harvested in 1994.

- Pulpwood receipts in 1994 totaled 3.7 million cords, a 6-percent increase from 1992 (table 7). Most of the increase occurred in pine and other hardwoods, while aspen receipts declined.

- In 1994, roundwood pulpwood supplied more than 88 percent of the pulpwood received; aspen and pine combined supplied more than 63 percent of the roundwood.

- Wisconsin supplied nearly 85 percent of the pulpwood processed by its pulp and particleboard mills in 1994. The remainder was imported from neighboring States, mainly Michigan (table 8).

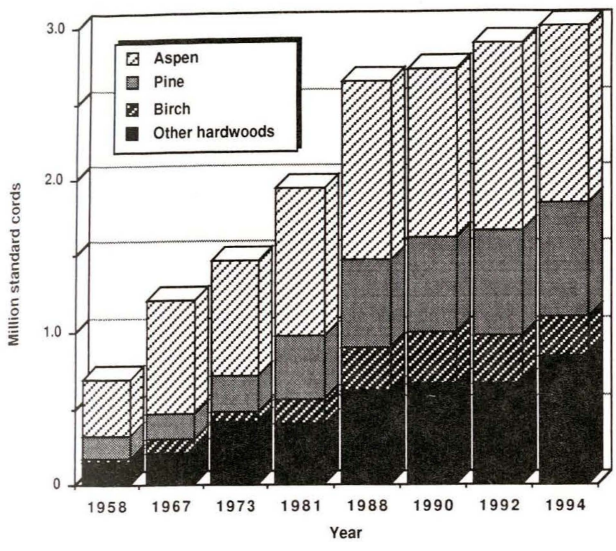

Figure 5.—*Pulpwood production of aspen and other selected species in Wisconsin for selected years.*

- Aspen, jack pine, spruce, and white birch were the main species imported (table 9).

Pulpwood is a major industrial product in Wisconsin. A yearly study is done of all pulpmills and particleboard mills in the North Central Region. Separate publications with the results of these studies are available from the North Central Forest Experiment Station.

SAW LOGS

- Loggers delivered 645 million board feet of Wisconsin saw logs to mills in Wisconsin, Michigan, Minnesota, and other States in 1994, up by nearly 10 percent (57 million board feet) from 1992 (table 10).

- Most of the increase was associated with aspen, soft maple, and white oak.

- Saw-log receipts also increased 10 percent; most of the increase was associated with hardwood saw logs, especially aspen, soft maple, basswood, and white oak.

- Wisconsin sawmills processed more than 90 percent of the State's production of saw logs (table 11, fig. 6). The remainder was exported to Minnesota, Michigan, Iowa, and Illinois.

- Minnesota and Michigan received the two largest shipments of Wisconsin saw logs. Red pine was the single largest species exported to Minnesota, while red oak was the single largest species shipped to Michigan sawmills.

- The Northwest Unit of Wisconsin provided most of the saw-log volume that was exported to Minnesota and Michigan. The

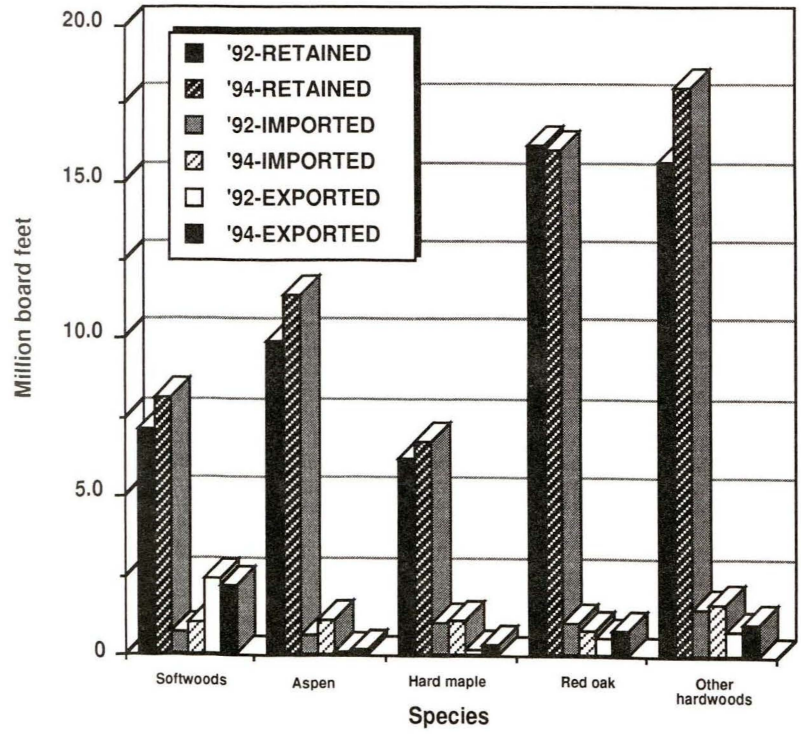

Figure 6.—*Saw-log production exported (mills outside Wisconsin), imported, and retained by select species in Wisconsin, 1992 and 1994.*

Southwest Unit shipped more than 10 million board feet of saw logs to Iowa and Illinois combined.

- The Northeast and Northwest Units together provided more than half of the State's production of saw logs (table 12).

- Major saw-log producing counties with more than 20 million board feet each were Marathon, Monroe, Forest, Langlade, Marinette, Vilas, Bayfield, and Sawyer.

- Wisconsin supplied more than 90 percent of the saw-log volume needed by its sawmills in 1994 (table 13). The remainder was imported mostly from Michigan, a number of other States and Canada.

VENEER LOGS

- Between surveys, veneer-log production in Wisconsin increased slightly, from 52,210 thousand board feet in 1992 to 52,269 thousand board feet in 1994. At the same time, veneer-log receipts increased by more than 21 percent to 59,620 thousand board feet (table 14).

- Red oak veneer-log production declined by 8 percent between 1992 and 1994, but this was offset by increases in white birch and hard maple production during that time (table 15). Red oak, white birch, and hard maple receipts at mills in Wisconsin had increases ranging from over 4 million board feet to 2 million board feet between 1992 and 1994.

- Wisconsin retained nearly 70 percent of the veneer-log volume it harvested in 1994 (table 16, fig. 7). The remaining 30 percent was shipped out of State for processing, mostly to Michigan.

- Aspen was the major species of veneer log exported from Wisconsin.

- Nearly three-quarters of all veneer-log volume was produced in the Northwest and Northeast Units combined.

- Wisconsin supplied 60 percent of the State's veneer-log requirements in 1994 (table 17). Michigan provided another 27 percent and Minnesota, Canada, and other States outside the region provided the remaining 3 percent.

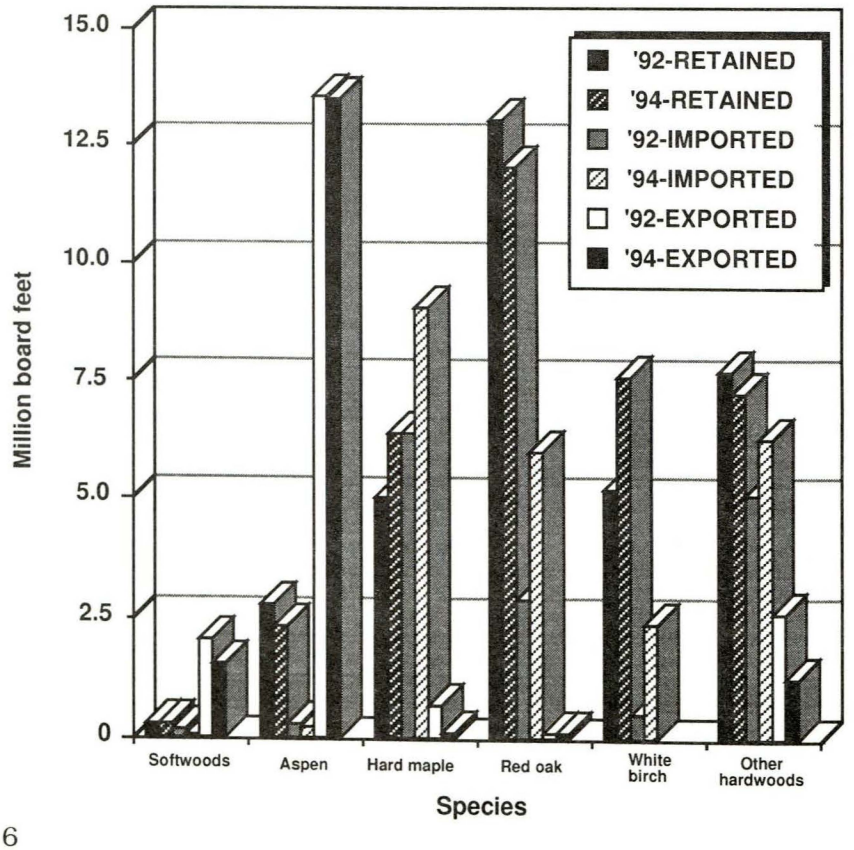

Figure 7.— *Veneer production exported (mills outside Wisconsin), imported, and retained by select species in Wisconsin, 1992 and 1994.*

- Red oak, hard maple, and white birch make up more than 70 percent of the veneer-log volume processed in the State. More than 50 percent of these three species combined were imported from Michigan (table 18).

OTHER PRODUCTS

- Industrial fuelwood totaled nearly 4.7 million cubic feet in 1994, the same level as in 1992.

- All of the industrial fuelwood production occurred in hardwood species, mainly aspen and red oak.

- The Northeast Unit produced the most industrial fuelwood in 1994 with 4 million cubic feet; the remaining 0.7 million cubic feet was harvested in the Central and Northwest Units.

- In 1994, 4.8 million cubic feet of other industrial roundwood was harvested in Wisconsin. These products included excelsior/shaving bolts, cabin logs, posts, cooperage, poles, and other miscellaneous products.

- Except for excelsior/shaving bolts and cooperage bolts, which were cut from mainly aspen and oak, respectively, almost all of the volume for these other products was cut from softwood species. Red pine, white pine, and northern white-cedar were cut for manufacturing log cabins. Red pine was also used for posts and poles along with northern white-cedar.

- Pole production showed an increase between surveys due to increased demand for utility poles in the U.S. and overseas. Cabin logs were reported separately in 1994 rather than combined with pole volume as in 1992.

Residential fuelwood is a major nonindustrial product in Wisconsin. The results of a residential fuelwood study conducted in 1994 are available in a separate Station publication.

TIMBER REMOVALS

- In the production of industrial roundwood in 1994, 345 million cubic feet of Wisconsin's growing-stock inventory was removed from timberland, a 5-percent increase from 1992 (table 19, fig. 8).

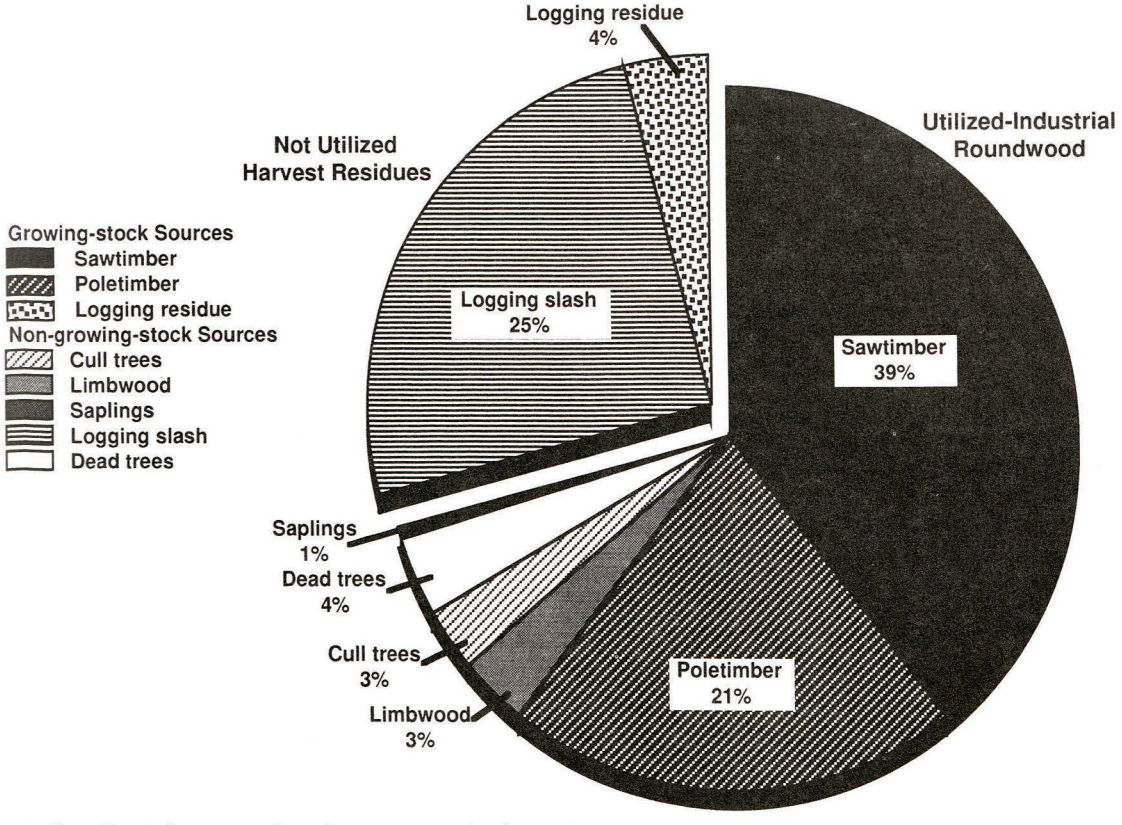

Figure 8.—*Distribution of timber removals for industrial roundwood by source of material, Wisconsin, 1994*

- Nearly 70 percent of the growing-stock removals came from the Northeast and Northwest Units combined, the region of the State where pulpwood production is concentrated (table 20).

- Aspen alone accounted for one-third of all growing-stock removals.

- Industrial roundwood harvesting also removed 1,052 million board feet of wood from the sawtimber portion of the growing-stock inventory in 1994 (table 21), a 7-percent increase over 1992.

- Nearly two-thirds of all sawtimber removals (63 percent) occurred in the Northeast and Northwest Units combined, the area of the State where pulpwood production is concentrated.

- Sawtimber removals were concentrated in four species—aspen, red oak, hard maple and red pine—which together made up more than two-thirds of all sawtimber removals. Aspen alone accounted for nearly one-third of all sawtimber removals.

HARVEST RESIDUES

- In 1994, harvesting of industrial roundwood products left nearly 157 million cubic feet of harvest residues on the ground (table 22)—a 10-percent increase over 1992—generally due to the increase in harvesting of saw logs and pulpwood in 1994.

- Two-thirds of the harvest residues were left in the Northeast and Northwest Units combined, with 20 percent left in the Central Unit.

- Three species—aspen, red oak group, hard maple—accounted for over 55 percent of all harvest residues.

PRIMARY MILL RESIDUE

- In converting industrial roundwood into milled products, such as lumber, sheathing, and wood pulp, Wisconsin's primary wood-using industry generated 3.1 million green tons of wood and bark residues (table 23).

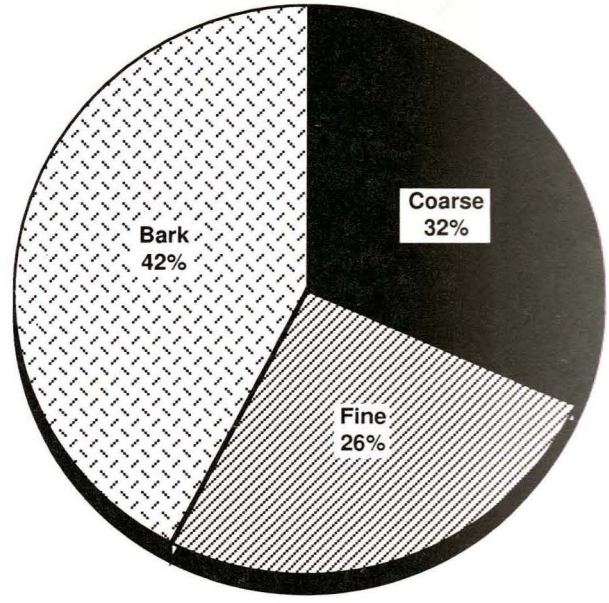

Figure 9.—*Distribution of residues generated by primary wood-using mills by type of residue, Wisconsin, 1994.*

- Bark and fine wood residues together made up about two-thirds of the total volume; coarse wood residue made up the remainder (fig. 9).

- Almost all the mill residues were used; 60 percent ended up as industrial fuel (fig. 10).

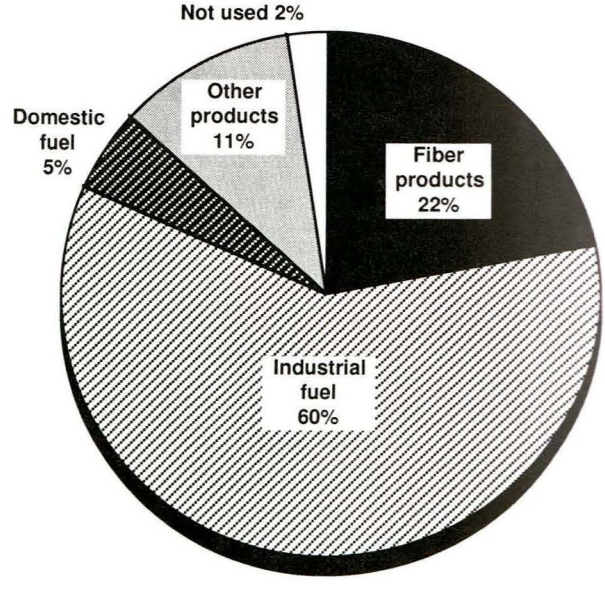

Figure 10.—*Distribution of residues generated by primary wood-using mills by method of disposal, Wisconsin, 1994.*

- Seventy percent of mill residues used for industrial fuelwood were burned at the mills where they were produced; the other 30 percent were sold to other mills or industries before being burned.

- In general, most coarse wood residues were used for fiber products; most fine residues were used for either fuel or other products, such as mulch and litter; and most bark was burned as fuel or used for mulch.

- More than 60 percent of the mill residues were generated in the Central and Northeast Units combined, and more than 70 percent of all unused mill residues were located in the Central and Southwest Units combined.

REGIONAL TRENDS

Northeast Unit

- In 1994, 124 million cubic feet of roundwood was produced in the 10 counties that make up the Northeast Unit of Wisconsin and accounted for nearly one-third of the State's total output.

- The 124 million cubic feet of industrial roundwood reflects a decline of 3 percent between 1992 and 1994. Softwood output increased by nearly 2 percent in the unit and hardwood output decreased by more than 4 percent.

- Saw-log production of nearly 32 million cubic feet accounted for more than one-quarter of the total roundwood production in this unit, near the same level as in 1992.

- Pulpwood production declined by nearly 5 percent and accounted for more than two-thirds of the unit's total roundwood output.

- The Northeast Unit produced more than 28 percent of the State's saw logs, 31 percent of the veneer logs, more than 34 percent of the pulpwood, more than 85 percent of the industrial fuelwood, and nearly one-third of the roundwood used for other industrial products (fig. 12).

- In 1994, the Northeast Unit had 84 sawmills, 3 pulpmills, 4 veneer mills, 2 particleboard mills, and 11 other miscellaneous mills.

- Nearly 12 percent of the sawmills in this unit had receipts greater than 10 million board feet; 80 percent of the mills had less than 5 million board feet of receipts.

Northwest Unit

- Between 1992 and 1994, roundwood production from the 12 counties that make up the Northwest Unit increased by more than 10 percent to 138 million cubic feet.

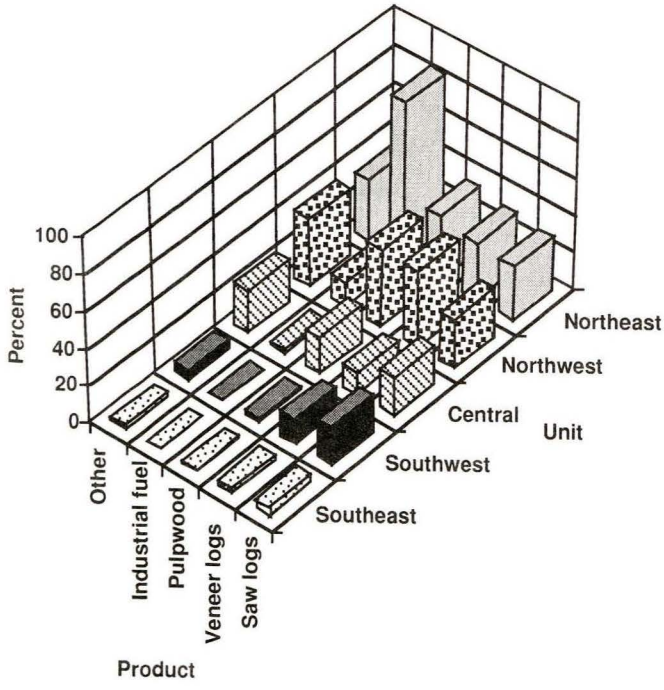

Figure 12.—*Percent of industrial roundwood products by unit, Wisconsin, 1994.*

- This unit accounted for more than 36 percent of the State's total roundwood output in 1994, an increase of nearly 2 percent from 1992.

- Saw-log production of nearly 29 million cubic feet accounted for more than one-fifth of the total roundwood production in this unit.

- Pulpwood production increased nearly 10 percent between 1992 and 1994, and accounted for nearly three-quarters of the unit's total roundwood output in 1994.

- The Northwest Unit produced more than 25 percent of the State's saw logs, more than 41 percent of the veneer logs, 42 percent of the pulpwood, more than 12 percent of the industrial fuelwood, and 36 percent of the roundwood used for other industrial products.

- In 1994, 88 mills, including 72 sawmills, 4 veneer mills, 3 pulpmills, 1 waferboard mill, and 8 miscellaneous mills, operated in the Northwest Unit.

- Only 2 mills in the Northwest Unit had receipts of more than 10 million board feet; nearly 90 percent of the mills had receipts less than 5 million board feet.

Central Unit

- The 13-county Central Unit produced the third largest amount of roundwood in the State. In 1994, this unit produced almost 77 million cubic feet of industrial roundwood, over 15 percent more than in 1992. Total production of industrial roundwood was more than one-fifth of the State's total industrial roundwood output.

- Saw-log production of more than 24 million cubic feet accounted for nearly one-third of the total roundwood produced in this unit in 1994.

- Pulpwood production increased by nearly 12 percent between 1992 and 1994, and accounted for nearly two-thirds of the unit's total roundwood output in 1994.

- The Central Unit produced more than 21 percent of the State's saw logs, nearly 12 percent of the veneer logs, more than 20 percent of the pulpwood, 1 percent of the industrial fuelwood, and more than 20 percent of the other industrial roundwood produced.

- In 1994, 99 mills, including 84 sawmills, 3 veneer mills, 8 pulpmills, 1 particleboard mill, and 3 miscellaneous mills, operated in the Central Unit.

- Six percent of the sawmills in the Central Unit had receipts of 5 million board feet or more.

Southwest Unit

- The 14 counties that make up the Southwest Unit produced nearly 30 million cubic feet of industrial roundwood, over 3 percent more than in 1992. Total production of industrial roundwood was nearly 8 percent of the State's total industrial roundwood output.

- Saw-log production increased by nearly 11 percent to 23 million cubic feet in 1994; this volume accounted for nearly 78 percent of the unit's industrial roundwood production.

- Pulpwood production declined by nearly 20 percent from 1992 to 5 million cubic feet of roundwood output in 1994. Pulpwood production accounted for slightly more than 17 percent of the unit's total roundwood output.

- The Southwest Unit produced more than 20 percent of the State's saw logs, nearly 13 percent of the veneer logs, 2 percent of the pulpwood, and more than 4 percent of the other industrial products.

- In 1994, 78 mills, including 74 sawmills and 4 miscellaneous mills, operated in the Southwest Unit.

- More than 4 percent of the sawmills in the unit had receipts greater than 10 million board feet; more than 86 percent of the mills had receipts less than 5 million board feet.

Southeast Unit

- In 1994, the 23 counties that make up the Southeast Unit of Wisconsin, accounted for only 2 percent of the State's roundwood production, or 8 million cubic feet of industrial roundwood output. This reflected an increase of more than 5 percent between 1992 and 1994.

- The production of saw logs was 4.8 million cubic feet, accounting for more than 58 percent of the unit's total roundwood output.

- Pulpwood production increased more than 47 percent between 1992 and 1994, and accounted for more than one-third of the unit's roundwood output in 1994.

- The Southeast Unit produced more than 4 percent of the State's saw logs, more than 3 percent of the veneer logs, more than 1 percent of the pulpwood, and less than 2 percent of the other industrial roundwood produced.

- In 1994, the Southeast Unit had 57 sawmills, 2 veneer mills, 3 pulpmills, and 3 miscellaneous mills.

- Only one sawmill in the Southeast Unit had receipts greater than 10 million board feet, nearly 2 percent had receipts between 5 million and 10 million board feet, while 12 percent had receipts between 1 million and 5 million board feet.

APPENDIX

STUDY METHODS

This study was a cooperative effort of the Wisconsin Department of Natural Resources (WiDNR) and the North Central Forest Experiment Station (NCFES). Using mail questionnaires supplied by NCFES and designed to determine the size and composition of the State's primary wood-using industry, its use of roundwood, and its generation and disposition of wood residues. The WiDNR canvassed all primary wood-using mills within the State. It followed up on nonresponding mills by using additional mailings, telephone, and personal contacts until a 100-percent response was achieved. Completed questionnaires were sent to NCFES for editing and processing.

As part of data editing and processing, all industrial roundwood volumes reported on the questionnaires were converted to standard units of measure using regional conversion factors. Timber removals by source of material and harvest residues generated during logging were estimated from standard product volumes using factors developed from logging utilization studies previously conducted by NCFES. Finalized data on Wisconsin's industrial roundwood receipts were loaded into a regional timber removals data base and supplemented with data on out-of-State uses of Wisconsin roundwood to provide a complete assessment of Wisconsin's timber product output.

DEFINITION OF TERMS

Board foot.—Unit of measure applied to roundwood. It relates to lumber that is 1 foot long, 1 foot wide, and 1 inch thick (or its equivalent).

Bolt.—A short log, no more than 16 to 20 feet long, to be sawn for lumber or peeled for veneer.

Central stem.—The portion of a tree between a 1-foot stump and the minimum 4.0-inch top diameter outside bark, or point where the central stem breaks into limbs.

Coarse mill residue.—Wood residue suitable for chipping such as slabs, edgings, and veneer cores.

Commercial species.—Tree species presently or prospectively suitable for industrial wood products. (Note: Excludes species of typically small size, poor form, or inferior quality such as hophornbeam, Osage-orange, and redbud.)

Cull removals.—Net volume of rough and rotten trees plus the net volume in sections of the central stem of growing-stock trees that do not meet regional merchantability standards, harvested for industrial roundwood products.

Dead removals.—Net volume of dead trees harvested for industrial roundwood products.

Diameter at breast height (d.b.h.).—The outside bark diameter at 4.5 feet above the forest floor on the uphill side of the tree. For determining breast height, the forest floor includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

Fine mill residue.—Wood residue not suitable for chipping such as sawdust and veneer clippings.

Forest land.—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. (Note: Stocking is measured by comparing specified standards with basal area and/or number of trees, age or size, and spacing.) The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet wide.

Growing-stock removals.—The growing-stock volume removed from the timberland inventory by harvesting industrial roundwood products. (Note: Includes sawtimber removals, poletimber removals, and logging residues.)

Growing-stock tree.—A live timberland tree of commercial species that meets specified standards of size, quality, and merchantability. (Note: Excludes rough, rotten, and dead trees.)

Growing-stock volume.—Net volume of growing-stock trees 5.0 inches d.b.h. and over, from 1 foot above the ground to a minimum 4.0 inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Harvest residues.—The total net volume of unused portions of trees cut or killed by logging. (Note: Includes both logging residues and logging slash.)

Industrial roundwood products.—Saw logs, pulpwood, veneer logs, poles, commercial posts, piling, cooperage logs, particleboard bolts, shaving bolts, lath bolts, charcoal bolts, and chips from roundwood used for pulp or board products.

Industrial roundwood exports.—The quantity of industrial roundwood harvested in a geographical area and transported to other geographical areas.

Industrial roundwood imports.—The quantity of industrial roundwood received from other geographical areas.

Industrial roundwood production.—The quantity of industrial roundwood harvested in a geographic area plus all industrial roundwood exported to other geographical areas.

Industrial roundwood receipts.—The quantity of industrial roundwood harvested for commercial mills in a geographic area plus all industrial roundwood imported from other geographical areas.

Industrial roundwood retained.—The quantity of industrial roundwood harvested from and processed by commercial mills within the same geographical area.

International 1/4-inch rule.—A log rule or formula for estimating the board foot volume of logs, allowing 1/2-inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In the form used by FIA, a 1/4-inch of kerf is assumed. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Limbwood removals.—Net volume of all portions of a tree other than the central

stem, (including forks, large limbs, tops, and stumps) harvested for industrial roundwood products.

Logging residue.—The net volume of unused portions of the merchantable central stem of growing-stock trees cut or killed by logging.

Logging slash.—The net volume of unused portions of the unmerchantable (non-growing-stock) sections of trees cut or killed by logging.

Merchantable sections.—Refers to sections of the central stem of growing-stock trees that meet either pulpwood or saw-log specifications.

Net volume.—Gross volume less deductions for rot, sweep, or other defects affecting use for roundwood products.

Noncommercial species.—Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial roundwood products. Classified in volume tables as rough trees.

Nonforest land.—Land that has never supported forests, and land formerly forested where use for timber management is precluded by development for other uses. (Note: Includes areas used for crops, orchards, christmas trees, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 39.9-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, improved roads and nonforest strips must be more than 120 feet wide and more than 1 acre to qualify as nonforest land.)

Nonforest land removals.—Net volume of trees on nonforest lands harvested for industrial roundwood products.

Poletimber.—A growing-stock tree at least 5.0 inches d.b.h. but smaller than sawtimber size (9.0 inches d.b.h. for softwoods, 11.0 inches d.b.h. for hardwoods).

Poletimber removals.—Net volume in the merchantable central stem of poletimber trees harvested for industrial roundwood products.

Primary wood-using mills.—Mills receiving roundwood or chips from roundwood for processing into products.

Primary wood-using mill residue.—Wood materials (coarse and fine) and bark generated at manufacturing plants from roundwood processed into principal products. These residues include wood products (byproducts) obtained incidental to production of principal products and wood materials not used for some product.

Rotten tree.—A tree that does not meet regional merchantability standards because of excessive unsound cull.

Rough tree.—A tree that does not meet regional merchantability standards because of excessive sound cull. Includes noncommercial tree species.

Roundwood.—Logs, bolts, or other round sections cut from trees (including chips from roundwood).

Sapling.—A live tree between 1.0 and 5.0 inches d.b.h.

Sapling removals.—Net volume in saplings harvested for industrial roundwood products.

Saw-log portion.—That portion of the central stem of sawtimber trees between the stump and the saw-log top.

Saw-log top.—The point on the central stem of sawtimber trees above which a saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber removals.—As used in table 19, sawtimber removals refers to the net volume in the merchantable central stem of sawtimber trees harvested for industrial roundwood products. (Note: Includes the saw-log and upper stem portions of sawtimber trees.) When referring to the sawtimber volume removed from the timberland inventory as in table 21, sawtimber removals refers to the net volume in the saw-log portion of sawtimber trees harvested for roundwood products or left on the ground as harvest residue, and is usually expressed in thousands of board feet (International 1/4-inch rule).

Sawtimber tree.—A growing-stock tree containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. and hardwoods must be at least 11.0 inches d.b.h.

Sawtimber volume.—Net volume in the saw-log portion of sawtimber trees.

Softwoods.—Coniferous trees, usually evergreen, having needles or scale-like leaves.

Timber product output.—The volume of roundwood products produced from an area's forests.

Timberland.—Forest land that is producing, or is capable of producing, in excess of 20 cubic feet per acre per year of industrial roundwood products under natural conditions, is not withdrawn from timber utilization by statute or administrative regulation, and is not associated with urban or rural development.

Tree.—A woody plant usually having one or more perennial stems, a more or less definitely formed crown of foliage, and a height of at least 12 feet at maturity.

Upper stem portion.— That portion of the central stem of sawtimber trees between the saw-log top and the minimum top diameter of 4.0 inches outside bark, or to the point where the central stem breaks into limbs.

Veneer log or bolt.—A log or bolt used in the production of plywood, finished panels, containers, or veneer sheets, both rotary cut and sliced.

COMMON AND SCIENTIFIC NAMES OF TREE SPECIES MENTIONED IN THIS REPORT

SOFTWOODS

Jack pine ..... *Pinus banksiana*
Red pine ..... *Pinus resinosa*
Eastern white pine ..... *Pinus strobus*
Spruce
- White spruce ..... *Picea glauca*
- Black spruce ..... *Picea mariana*

Balsam fir ..... *Abies balsamea*
Eastern hemlock ..... *Tsuga canadensis*
Tamarack ..... *Larix laricina*
Northern white-cedar ..... *Thuja occidentalis*
Eastern redcedar ..... *Juniperis virginiana*

HARDWOODS

White oak
- White oak ..... *Quercus alba*
- Bur oak ..... *Quercus macrocarpa*
- Chinkapin oak ..... *Quercus muehlenbergii*
- Swamp white oak ..... *Quercus bicolor*

Red oak
- Northern red oak ..... *Quercus rubra*
- Black oak ..... *Quercus velutina*
- Northern pin oak ..... *Quercus ellipsoidalis*

Hickory
- Bitternut hickory ..... *Carya cordiformis*
- Pignut hickory ..... *Carya glabra*
- Shagbark hickory ..... *Carya ovata*

White birch ..... *Betula papyrifera*
Yellow birch ..... *Betula alleghaniensis*
Hard maple
- Black maple ..... *Acer nigrum*
- Sugar maple ..... *Acer saccharum*

Soft maple
- Red maple ..... *Acer rubrum*
- Silver maple ..... *Acer saccharinum*

American beech ..... *Fagus grandifolia*
Ash
- Black ash ..... *Fraxinus nigra*
- White ash ..... *Fraxinus americana*
- Green ash ..... *Fraxinus pennsylvanica*

Balsam poplar ..... *Populus balsamifera*
Aspen
- Bigtooth aspen ..... *Populus grandidentata*
- Quaking aspen ..... *Populus tremuloides*

Eastern cottonwood ..... *Populus deltoides*
American basswood ..... *Tilia americana*
Black walnut ..... *Juglans nigra*
Elm
- American elm ..... *Ulmus americana*
- Rock elm ..... *Ulmus thomasii*
- Slippery elm ..... *Ulmus rubra*

Other hardwoods
- Northern catalpa ..... *Catalpa speciosa*
- Black cherry ..... *Prunus serotina*
- River birch ..... *Betula nigra*
- Black locust ..... *Robinia pseudoacacia*
- Honeylocust ..... *Gleditsia triacanthos*
- Red mulberry ..... *Morus rubra*
- Butternut ..... *Juglans cineria*
- Black willow ..... *Salix nigra*
- Boxelder ..... *Acer negundo*
- Hackberry ..... *Celtis occidentalis*

TABLE TITLES

Table 1.—Number of active primary wood-using mills in Wisconsin, 1981, 1986, 1988, 1990, 1992, and 1994

Table 2.—Industrial roundwood receipts by type of mill in Wisconsin, 1981, 1986, 1988, 1990, 1992, and 1994

Table 3.—Industrial roundwood production by Forest Survey Unit, species group, and type of product, Wisconsin, 1994

Table 4.—Wisconsin pulpwood production by species group, 1946-1994

Table 5.—Wisconsin pulpwood production by species group and destination, 1994

Table 6.—Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

Table 7.—Pulpwood receipts in Wisconsin by species group, 1946-1994

Table 8.—Pulpwood receipts in Wisconsin by area of origin, 1960-1994

Table 9.—Pulpwood receipts in Wisconsin by species group and area of origin, 1994

Table 10.—Saw-log production and receipts in Wisconsin by species group, 1992 and 1994

Table 11.—Saw-log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1994

Table 12.—Saw-log production by Forest Survey Unit, county, and species group, Wisconsin, 1994

Table 13.—Saw-log receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1994

Table 14.—Veneer log and bolt production and receipts in Wisconsin for selected years, 1946-1994

Table 15.—Veneer log and bolt production and receipts by species group in Wisconsin, 1992 and 1994

Table 16.—Veneer log and bolt production in Wisconsin by species group and State or country of destination, 1994

Table 17.—Veneer log and bolt receipts in Wisconsin by area of origin for selected years, 1946-1994

Table 18.—Veneer log and bolt receipts in Wisconsin by species group and area of origin, 1994

Table 19.—Wood material harvested for industrial roundwood by Forest Survey Unit, source of material, and species group, Wisconsin, 1994

Table 20.—Growing-stock removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

Table 21.—Sawtimber removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

Table 22.—Harvest residues generated by industrial roundwood harvesting by Forest Survey Unit, county, and species group, Wisconsin, 1994

Table 23.—Residue produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Wisconsin, 1994

Table 1.--Number of active primary wood-using mills in Wisconsin, 1981, 1986, 1988, 1990, 1992, 1994

Kind of mill	1981	1986	1988	1990	1992	1994
Sawmills 1/						
Large 2/	23	21	32	27	33	39
Medium 3/	110	103	92	102	106	111
Small 4/	140	142	131	139	114	118
Total	273	266	255	268	253	268
Pulp mills 5/	23	21	22	22	21	21
Veneer mills	15	15	17	17	12	12
Other mills	12	15	15	16	25	29
Total	323	317	309	323	311	330

1/ Mills persistently sawing 50 mbf or more annually.

2/ Annual lumber production in excess of 5 million board feet.

3/ Annual lumber production from 1 million to 5 million board feet.

4/ Annual lumber production from 50 thousand to 1 million board feet.

5/ Includes particleboard plants, i.e., OSB, waferboard, etc.

Table 2.--Industrial roundwood receipts by type of mill in Wisconsin, 1981, 1986, 1988, 1990, 1992, 1994

(In million cubic feet)

Kind of mill	1981	1986	1988	1990	1992	1994
ALL SPECIES						
Pulp mills 1/	208.7	224.0	226.1	235.7	248.1	261.4
Sawmills	94.4	93.2	93.4	97.8	105.7	117.4
Other mills 2/	6.6	9.7	9.2	14.0	15.4	17.2
Total	309.7	326.9	328.7	347.5	369.2	396.0
SOFTWOODS						
Pulp mills	62.7	55.9	67.2	72.9	76.5	83.0
Sawmills	15.8	11.3	13.2	13.8	13.8	16.1
Other mills	0.2	0.4	0.1	2.3	0.5	1.0
Total	78.7	67.6	80.5	89.0	90.8	101.2
HARDWOODS						
Pulp mills	146.0	168.1	158.9	162.8	171.6	178.4
Sawmills	78.6	81.9	80.2	84.0	91.9	101.3
Other mills	6.4	9.3	9.1	11.7	14.8	16.1
Total	231.0	259.3	248.2	258.5	278.3	295.8

1/ Includes particleboard plants, i.e., OSB, waferboard, etc.

2/ Does not include treating plants or fuelwood receipts.

Rows and columns may not sum due to rounding.

Table 3.--Industrial roundwood production by Forest Survey Unit, species group, and type of product, Wisconsin, 1994 1/

ALL UNITS

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS																	
Balsam fir	592	124	--	--	63,172	4,978	2	--	--	--	--	--	--	5	5	--	5,109
Redcedar	23	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Tamarack	42	9	133	22	8,555	674	--	--	--	--	--	--	--	--	--	--	705
Spruce	1,216	255	738	120	30,783	2,426	2	--	--	--	--	--	--	--	--	--	2,803
Jack pine	14,341	3,010	3	1	439,605	34,685	1	--	--	--	--	--	--	30	31	--	37,728
Red pine	52,582	8,949	332	54	264,526	20,898	511	--	--	--	--	4,313	26	100	103	--	30,541
White pine	28,488	4,849	563	92	33,492	2,646	192	--	--	--	--	--	--	--	--	82	7,860
N. white-cedar	867	182	8	1	176	14	85	--	--	--	--	--	--	127	131	1	414
Hemlock	4,678	796	--	--	33,130	2,617	1	--	--	--	--	--	--	--	--	--	3,415
Total	102,829	18,180	1,776	289	873,438	68,937	793	--	--	--	--	4,313	26	262	270	83	88,578
HARDWOODS																	
Soft maple	37,896	6,764	678	110	215,614	17,054	--	--	--	233	16	--	--	--	--	40	23,985
Hard maple	70,098	11,713	6,494	1,057	280,566	22,165	--	--	--	219	15	--	--	--	--	--	34,951
White birch	22,267	3,975	7,576	1,233	246,395	19,489	--	--	--	86	6	--	--	--	--	20	24,723
Yellow birch	4,937	881	679	111	16,383	1,294	--	--	--	--	--	--	--	--	--	20	2,306
Hickory	2,435	435	--	--	--	--	--	--	--	--	--	--	--	--	--	--	435
Hackberry	205	37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	37
Beech	1,446	258	62	10	911	72	--	--	--	--	--	--	--	--	--	--	340
Ash	19,315	3,448	260	42	67,273	5,315	--	--	--	73	5	--	--	--	--	--	8,810
Butternut	274	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	49
Black walnut	697	124	234	38	--	--	--	--	--	--	--	--	--	--	--	--	163
Cottonwood	1,442	257	156	25	981	77	--	--	--	--	--	--	--	--	--	--	360
Balsam poplar	90	16	--	--	6,086	481	--	--	--	--	--	--	--	--	--	--	497
Aspen	115,003	20,079	15,805	2,573	1,159,197	91,577	--	--	--	50,589	3,541	--	--	25	25	3,154	120,949
Black cherry	4,705	840	474	77	1,371	108	--	--	--	--	--	--	--	--	--	--	1,025
Red oak group	167,561	29,340	12,154	1,979	119,626	9,462	1	86	12	15,411	1,079	--	--	--	--	--	41,872
White oak group	50,652	8,869	3,083	502	36,605	2,895	--	416	57	241	17	--	--	1	1	--	12,342
Willow	49	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9
Basswood	38,574	6,885	2,838	462	54,608	4,314	--	10	1	--	--	--	--	--	--	298	11,961
Elm	4,766	851	--	--	27,477	2,171	--	--	--	--	--	--	--	--	--	--	3,021
Other hardwoods	20	4	--	--	14,466	1,143	--	--	--	--	--	--	--	--	--	--	1,146
Total	542,432	94,835	50,493	8,220	2,247,559	177,617	1	512	71	66,851	4,680	--	--	26	26	3,530	288,979
All species	645,262	113,014	52,269	8,509	3,120,997	246,554	794	512	71	66,851	4,680	4,313	26	288	296	3,614	377,557

(Table 3 contined on next page)

(Table 3 continued)

CENTRAL UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS																	
Balsam fir	6	1	--	--	241	19	--	--	--	--	--	--	--	--	--	--	20
Tamarack	--	--	--	--	419	33	--	--	--	--	--	--	--	--	--	--	33
Spruce	9	2	--	--	1,433	113	--	--	--	--	--	--	--	--	--	--	115
Jack pine	484	102	*	*	190,233	15,009	--	--	--	--	--	--	--	13	13	--	15,124
Red pine	4,525	770	26	4	105,161	8,308	242	--	--	--	--	96	1	43	44	--	9,368
White pine	8,355	1,422	32	5	11,662	921	136	--	--	--	--	--	--	--	--	35	2,519
N. white-cedar	42	9	--	--	--	--	2	--	--	--	--	--	--	--	--	--	10
Hemlock	79	13	--	--	1,217	96	--	--	--	--	--	--	--	--	--	--	110
Total	13,501	2,319	59	10	310,366	24,499	379	--	--	--	--	96	1	55	57	35	27,299
HARDWOODS																	
Soft maple	12,281	2,192	179	29	26,542	2,099	--	--	--	153	11	--	--	--	--	24	4,355
Hard maple	11,457	1,915	873	142	33,720	2,664	--	--	--	104	7	--	--	--	--	--	4,728
White birch	2,083	372	349	57	15,350	1,214	--	--	--	--	--	--	--	--	--	12	1,655
Yellow birch	403	72	19	3	2,353	186	--	--	--	--	--	--	--	--	--	--	261
Hickory	364	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	65
Hackberry	1	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*
Beech	69	12	--	--	208	16	--	--	--	--	--	--	--	--	--	--	29
Ash	4,210	751	7	1	9,111	720	--	--	--	57	4	--	--	--	--	--	1,476
Butternut	62	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11
Black walnut	--	--	25	4	--	--	--	--	--	--	--	--	--	--	--	--	4
Cottonwood	136	24	10	2	68	5	--	--	--	--	--	--	--	--	--	--	31
Balsam poplar	4	1	--	--	70	6	--	--	--	--	--	--	--	--	--	--	6
Aspen	20,345	3,552	232	38	162,513	12,838	--	--	--	--	--	--	--	12	12	445	16,885
Black cherry	796	142	7	1	655	52	--	--	--	--	--	--	--	--	--	--	195
Red oak group	53,272	9,328	2,893	471	50,029	3,957	--	--	--	562	39	--	--	--	--	--	13,796
White oak group	13,454	2,356	914	149	17,141	1,356	--	--	--	91	6	--	--	--	--	--	3,867
Basswood	6,307	1,126	441	72	3,795	300	--	--	--	--	--	--	--	--	--	13	1,510
Elm	346	62	--	--	6,841	540	--	--	--	--	--	--	--	--	--	--	602
Other hardwoods	--	--	--	--	1,477	117	--	--	--	--	--	--	--	--	--	--	117
Total	125,588	21,981	5,950	969	329,873	26,071	--	--	--	967	68	--	--	12	12	493	49,592
All species	139,090	24,300	6,009	978	640,239	50,570	379	--	--	967	68	96	1	67	68	527	76,892

(Table 3 contined on next page)

(Table 3 contined)

NORTHEAST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*products*
SOFTWOODS																	
Balsam fir	383	80	--	--	31,494	2,482	2	--	--	--	--	--	--	5	5	--	2,569
Tamarack	27	6	125	20	3,256	257	--	--	--	--	--	--	--	--	--	--	283
Spruce	725	152	599	98	12,344	973	2	--	--	--	--	--	--	--	--	--	1,224
Jack pine	4,522	949	2	*	64,843	5,116	*	--	--	--	--	--	--	--	--	--	6,066
Red pine	18,401	3,132	205	33	59,952	4,736	179	--	--	--	--	383	2	--	--	--	8,083
White pine	8,992	1,531	402	65	10,396	821	32	--	--	--	--	--	--	--	--	--	2,449
N. white-cedar	311	65	8	1	176	14	29	--	--	--	--	--	--	126	130	--	239
Hemlock	4,085	695	--	--	28,136	2,223	1	--	--	--	--	--	--	--	--	--	2,919
Total	37,447	6,610	1,342	219	210,596	16,621	245	--	--	--	--	383	2	132	135	--	23,832
HARDWOODS																	
Soft maple	10,332	1,844	352	57	91,447	7,233	--	--	--	70	5	--	--	--	--	--	9,140
Hard maple	29,784	4,977	3,724	606	134,238	10,605	--	--	--	115	8	--	--	--	--	--	16,196
White birch	10,874	1,941	4,422	720	107,784	8,525	--	--	--	36	3	--	--	--	--	--	11,189
Yellow birch	2,805	501	467	76	8,190	647	--	--	--	--	--	--	--	--	--	--	1,224
Hickory	163	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29
Beech	1,041	186	62	10	561	44	--	--	--	--	--	--	--	--	--	--	240
Ash	5,048	901	77	13	27,667	2,186	--	--	--	16	1	--	--	--	--	--	3,100
Butternut	54	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10
Black walnut	--	--	38	6	--	--	--	--	--	--	--	--	--	--	--	--	6
Cottonwood	*	*	--	--	578	46	--	--	--	--	--	--	--	--	--	--	46
Balsam poplar	60	11	--	--	4,033	319	--	--	--	--	--	--	--	--	--	--	329
Aspen	54,012	9,430	1,617	263	393,353	31,075	--	--	--	42,857	3,000	--	--	--	--	867	44,635
Black cherry	990	177	252	41	268	21	--	--	--	--	--	--	--	--	--	--	239
Red oak group	13,128	2,299	2,983	486	31,304	2,476	--	--	--	14,299	1,001	--	--	--	--	--	6,261
White oak group	3,488	611	45	7	8,135	643	--	--	--	--	--	--	--	--	--	--	1,262
Basswood	11,969	2,136	821	134	27,103	2,141	--	--	--	--	--	--	--	--	--	278	4,689
Elm	1,018	182	--	--	14,708	1,162	--	--	--	--	--	--	--	--	--	--	1,344
Other hardwoods	--	--	--	--	6,360	502	--	--	--	--	--	--	--	--	--	--	502
Total	144,765	25,234	14,859	2,419	855,728	67,625	--	--	--	57,393	4,017	--	--	--	--	1,145	100,440
All species	182,212	31,844	16,202	2,638	1,066,324	84,246	245	--	--	57,393	4,017	383	2	132	135	1,145	124,273

(Table 3 contined on next page)

(Table 3 continued)

NORTHWEST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS																	
Balsam fir	181	38	--	--	31,395	2,474	--	--	--	--	--	--	--	--	--	--	2,512
Tamarack	4	1	8	1	4,873	384	--	--	--	--	--	--	--	--	--	--	386
Spruce	460	97	138	22	15,775	1,243	--	--	--	--	--	--	--	--	--	--	1,362
Jack pine	9,330	1,958	1	*	177,428	13,999	1	--	--	--	--	--	--	3	3	--	15,962
Red pine	27,437	4,670	100	16	60,579	4,786	23	--	--	--	--	3,835	23	10	10	--	9,528
White pine	8,803	1,498	115	19	3,919	310	3	--	--	--	--	--	--	--	--	--	1,829
N. white-cedar	21	4	--	--	--	--	--	--	--	--	--	--	--	--	--	1	5
Hemlock	426	72	--	--	3,717	294	--	--	--	--	--	--	--	--	--	--	366
Total	46,662	8,339	362	59	297,686	23,489	27	--	--	--	--	3,835	23	13	13	1	31,950
HARDWOODS																	
Soft maple	7,787	1,390	89	15	94,942	7,509	--	--	--	10	1	--	--	--	--	--	8,915
Hard maple	15,043	2,514	790	129	109,736	8,669	--	--	--	--	--	--	--	--	--	--	11,311
White birch	8,665	1,547	2,598	423	120,768	9,553	--	--	--	50	4	--	--	--	--	--	11,526
Yellow birch	1,704	304	193	31	5,724	452	--	--	--	--	--	--	--	--	--	--	788
Hickory	34	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6
Hackberry	79	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14
Beech	26	5	--	--	137	11	--	--	--	--	--	--	--	--	--	--	15
Ash	4,635	827	168	27	29,721	2,348	--	--	--	--	--	--	--	--	--	--	3,203
Butternut	92	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16
Black walnut	1	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*
Cottonwood	5	1	--	--	331	26	--	--	--	--	--	--	--	--	--	--	27
Balsam poplar	--	--	--	--	539	43	--	--	--	--	--	--	--	--	--	--	43
Aspen	33,391	5,830	13,893	2,262	573,027	45,269	--	--	--	7,732	541	--	--	9	9	1,659	55,570
Black cherry	146	26	180	29	337	27	--	--	--	--	--	--	--	--	--	--	82
Red oak group	30,550	5,349	2,480	404	34,150	2,701	--	48	7	550	39	--	--	--	--	--	8,499
White oak group	3,997	700	53	9	9,733	770	--	--	--	150	11	--	--	--	--	--	1,489
Basswood	11,242	2,007	870	142	22,461	1,774	--	6	1	--	--	--	--	--	--	--	3,924
Elm	432	77	--	--	5,881	465	--	--	--	--	--	--	--	--	--	--	542
Other hardwoods	--	--	--	--	6,388	505	--	--	--	--	--	--	--	--	--	--	505
Total	117,830	20,614	21,314	3,470	1,013,875	80,121	--	54	7	8,492	594	--	--	9	9	1,659	106,474
All species	164,493	28,952	21,676	3,529	1,311,562	103,611	27	54	7	8,492	594	3,835	23	21	21	1,660	138,424

(Table 3 contined on next page)

(Table 3 contined)

SOUTHEAST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS																	
Balsam fir	--	--	--	--	29	2	--	--	--	--	--	--	--	--	--	--	2
Tamarack	11	2	--	--	6	*	--	--	--	--	--	--	--	--	--	--	3
Spruce	12	2	--	--	503	40	--	--	--	--	--	--	--	--	--	--	42
Jack pine	2	*	--	--	2,094	165	--	--	--	--	--	--	--	--	--	--	166
Red pine	145	25	--	--	9,409	743	45	--	--	--	--	--	--	--	--	--	813
White pine	793	135	--	--	3,883	307	10	--	--	--	--	--	--	--	--	29	481
N.white-cedar	494	104	--	--	--	--	55	--	--	--	--	--	--	1	1	--	159
Hemlock	89	15	--	--	59	5	--	--	--	--	--	--	--	--	--	--	20
Total	1,545	284	--	--	15,984	1,262	110	--	--	--	--	--	--	1	1	29	1,686
HARDWOODS																	
Soft maple	3,158	564	46	7	1,017	80	--	--	--	--	--	--	--	--	--	--	652
Hard maple	2,623	438	319	52	938	74	--	--	--	--	--	--	--	--	--	--	564
White birch	208	37	176	29	1,390	110	--	--	--	--	--	--	--	--	--	--	176
Yellow birch	18	3	--	--	65	5	--	--	--	--	--	--	--	--	--	--	8
Hickory	252	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45
Hackberry	23	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4
Beech	310	55	--	--	5	*	--	--	--	--	--	--	--	--	--	--	56
Ash	2,156	385	--	--	255	20	--	--	--	--	--	--	--	--	--	--	405
Butternut	17	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3
Black walnut	79	14	20	3	--	--	--	--	--	--	--	--	--	--	--	--	17
Cottonwood	323	58	26	4	1	*	--	--	--	--	--	--	--	--	--	--	62
Balsam poplar	18	3	--	--	1,441	114	--	--	--	--	--	--	--	--	--	--	117
Aspen	1,011	177	36	6	13,318	1,052	--	--	--	--	--	--	--	--	--	12	1,247
Black cherry	372	66	2	*	42	3	--	--	--	--	--	--	--	--	--	--	70
Red oak group	8,738	1,530	508	83	1,601	127	--	--	--	--	--	--	--	--	--	--	1,739
White oak group	4,605	806	343	56	828	66	--	--	--	--	--	--	--	--	--	--	928
Basswood	1,276	228	265	43	820	65	--	--	--	--	--	--	--	--	--	--	336
Elm	405	72	--	--	13	1	--	--	--	--	--	--	--	--	--	--	73
Other hardwoods	5	--	--	--	46	4	--	--	--	--	--	--	--	--	--	--	5
Total	25,597	4,490	1,741	283	21,780	1,721	--	--	--	--	--	--	--	--	--	12	6,507
All species	27,142	4,773	1,741	283	37,763	2,983	110	--	--	--	--	--	--	1	1	41	8,193

(Table 3 continued on next page)

(Table 3 continued)

SOUTHWEST UNIT

Species group	Saw logs		Veneer logs		Pulpwood		Cabin logs	Cooperage		Industrial fuelwood		Poles		Posts		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*MCF 3/*	*MBF 2/*	*MCF 3/*	*Cords 4/*	*MCF 3/*	*Pieces*	*MCF 3/*	*M pieces*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS																	
Balsam fir	21	4	--	--	14	1	--	--	--	--	--	--	--	--	--	--	5
Redcedar	23	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Spruce	9	2	--	--	728	57	--	--	--	--	--	--	--	--	--	--	59
Jack pine	3	1	*	*	5,007	395	--	--	--	--	--	--	--	15	15	--	411
Red pine	2,074	353	*	*	29,426	2,325	22	--	--	--	--	--	--	48	49	--	2,749
White pine	1,544	263	13	2	3,632	287	11	--	--	--	--	--	--	--	--	19	581
Total	3,674	627	13	2	38,806	3,065	33	--	--	--	--	--	--	63	64	19	3,810
HARDWOODS																	
Soft maple	4,337	774	12	2	1,666	132	--	--	--	--	--	--	--	--	--	16	924
Hard maple	11,190	1,870	787	128	1,934	153	--	--	--	--	--	--	--	--	--	--	2,151
White birch	437	78	30	5	1,103	87	--	--	--	--	--	--	--	--	--	8	178
Yellow birch	8	1	--	--	51	4	--	--	--	--	--	--	--	--	--	20	25
Hickory	1,623	290	--	--	--	--	--	--	--	--	--	--	--	--	--	--	290
Hackberry	101	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18
Ash	3,267	583	7	1	519	41	--	--	--	--	--	--	--	--	--	--	625
Butternut	49	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9
Black walnut	617	110	151	25	--	--	--	--	--	--	--	--	--	--	--	--	135
Cottonwood	977	174	120	19	3	*	--	--	--	--	--	--	--	--	--	--	194
Balsam poplar	9	2	--	--	3	*	--	--	--	--	--	--	--	--	--	--	2
Aspen	6,245	1,090	27	4	16,987	1,342	--	--	--	--	--	--	--	5	5	171	2,612
Black cherry	2,402	429	34	6	69	5	--	--	--	--	--	--	--	--	--	--	440
Red oak group	61,873	10,834	3,291	536	2,542	201	1	38	5	--	--	--	--	--	--	--	11,577
White oak group	25,109	4,397	1,728	281	768	61	--	416	57	--	--	--	--	1	1	--	4,797
Willow	49	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9
Basswood	7,781	1,389	441	72	429	34	--	5	1	--	--	--	--	--	--	7	1,502
Elm	2,565	458	--	--	34	3	--	--	--	--	--	--	--	--	--	--	461
Other hardwoods	15	--	--	--	195	15	--	--	--	--	--	--	--	--	--	--	18
Total	128,651	22,517	6,629	1,079	26,303	2,079	1	459	63	--	--	--	--	6	6	221	25,966
All species	132,325	23,144	6,641	1,081	65,109	5,144	34	459	63	--	--	--	--	69	70	240	29,776

** = Less than 500 cubic feet or board feet.*

1/ Based on factors obtained fron the Wisconsin Utilization Study, 1994.

2/ Thousand board feet, International 1/4-inch rule.

3/ Thousand cubic feet.

4/Standard cords are 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of air space.

Rows and columns may not sum due to rounding.

Table 4.--Wisconsin pulpwood production by species group, 1946-1994

(In thousand standard cords, unpeeled) 1/

Year	Roundwood									Residue	
	Total	Pine	Balsam fir	Hemlock	Spruce	Cedar & tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	433	75	48	64	32	3	202	4	5	2/	2/
1947	497	157	53	50	31	6	187	8	5	2/	2/
1948	472	117	87	51	34	3	167	8	5	2/	2/
1949	427	72	78	47	33	1	184	10	--	2/	2
1950	468	93	69	47	31	2/	195	6	20	1	6
1951	565	102	55	51	30	1	281	28	17	--	--
1952	582	95	76	66	39	1	275	15	15	--	--
1953	553	71	45	51	26	1	306	12	41	--	--
1954	691	113	56	63	31	4	348	27	49	--	--
1955	710	121	48	58	23	4	365	16	75	--	--
1956	960	140	45	56	23	4	507	21	164	--	--
1957	934	126	60	57	27	6	453	27	178	--	--
1958	828	148	62	55	23	6	369	18	147	--	--
1959	972	186	52	49	21	6	431	26	159	5	37
1960	1,052	124	50	52	18	6	540	27	204	4	27
1961	1,078	154	61	47	23	7	530	34	201	3	18
1962	1,140	188	46	42	15	6	572	41	188	6	36
1963	1,302	170	60	52	19	6	613	50	233	13	86
1964	1,244	168	57	52	20	5	603	41	222	11	65
1965	1,253	207	50	60	15	4	607	24	197	14	75
1966	1,536	215	55	69	17	3	810	39	243	12	73
1967	1,417	174	48	42	13	3	739	84	203	10	101
1968	1,298	199	51	44	11	5	629	57	185	16	101
1969	1,450	216	50	51	13	2	697	62	238	15	106
1970	1,656	259	68	53	16	4	771	76	296	19	94
1971	1,552	268	54	42	12	3	736	51	269	16	101
1972	1,538	246	49	42	13	3	685	47	333	10	110
1973	1,758	232	67	32	16	1	761	73	400	21	155
1974	2,053	291	85	45	19	2	797	102	506	26	180
1975	1,505	240	98	45	25	4	588	83	244	36	142
1976	1,840	286	89	43	19	3	694	114	425	38	129
1977	1,816	297	73	43	19	5	696	103	383	48	149
1978	1,895	358	75	52	20	4	669	121	373	40	183
1979 3/	2,109	361	84	40	19	2	751	151	441	49	211
1980	2,362	388	101	34	32	4	873	185	456	40	249
1981	2,389	419	105	29	27	5	965	159	389	47	244
1982	2,285	494	103	33	28	7	884	154	339	42	201
1983	2,475	412	85	40	28	6	1,025	198	422	48	211
1984	2,647	483	84	25	42	4	1,067	208	439	47	248
1985	2,588	452	72	37	36	2	1,073	193	431	51	241
1986	2,926	500	46	37	30	2	1,208	283	528	52	240
1987	2,869	489	45	42	36	2	1,097	256	605	47	250
1988	3,084	574	71	46	43	4	1,171	279	606	56	234
1989	3,161	550	67	43	45	5	1,208	333	619	59	232
1990	3,093	620	66	38	49	9	1,096	331	657	48	179
1991	3,146	695	64	33	33	7	1,090	269	593	94	268
1992	3,307	695	61	29	41	5	1,216	307	655	63	235
1993	3,370	692	61	23	34	8	1,229	261	730	68	264
1994	3,466	738	63	33	31	9	1,159	263	826	68	276

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Less than 500 cords.

3/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Rows and columns may not sum due to rounding.

Table 5.--Wisconsin pulpwood production by species group and destination, 1994

(In thousand standard cords, unpeeled) 1/

Class of material and species group	Total	Michigan	Minnesota	Wisconsin
ROUNDWOOD				
SOFTWOODS				
Cedar	*	*	--	--
Balsam fir	64	2	13	49
Hemlock	34	2	--	32
Jack pine	439	2	4	433
Red pine	265	1	6	258
White pine	33	*	--	33
Spruce	30	*	2	28
Tamarack	8	*	--	8
Total	873	7	25	841
HARDWOODS				
Ash	67	4	--	63
Aspen	1,159	57	24	1,078
Balsam poplar	6	5	--	1
Basswood	54	6	--	48
Beech	1	*	--	1
White birch	247	50	--	197
Yellow birch	16	3	--	13
Cottonwood	1	--	--	1
Elm	27	*	--	27
Hickory	--	--	--	--
Hard maple	280	51	--	229
Soft maple	216	27	4	185
Red oak	119	3	*	116
White oak	37	--	--	37
Other hardwoods	16	1	--	15
Total	2,246	207	28	2,011
Total roundwood	3,119	214	56	2,852
RESIDUES 2/				
Softwood	68	10	--	58
Hardwood	274	16	1	257
Total	342	26	1	315
ALL MATERIAL	3,461	240	57	3,167

** = Less than 500 standard cords, unpeeled.*

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Chippable mill residues such as slabs, edgings, etc. Roundwood chips are included in roundwood.

Rows and columns may not sum due to rounding.

Table 6.--Pulpwood production from roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

(In standard cords, unpeeled)

Unit and county[1]	Species group											
	N. white-cedar	Balsam fir	Hem-lock	Jack pine	Red pine	White pine	Spruce	Tam-arack	Ash	Aspen	Balsam poplar	Bass-wood
NORTHEAST												
Florence	22	2,037	3,238	2,357	1,605	201	1,267	122	1,079	33,336	808	1,451
Forest	-	5,688	2,412	1,071	3,917	369	3,297	63	4,617	41,868	938	2,424
Langlade	-	4,279	1,390	1,712	4,771	273	1,451	146	4,415	50,088	217	2,755
Lincoln	-	2,892	577	2,667	2,480	644	827	605	3,932	48,495	101	3,992
Marinette	6	5,129	365	23,170	20,421	1,057	522	442	1,543	48,244	732	1,593
Menominee	147	1,535	17,504	1,829	2,307	2,707	327	133	2,295	22,456	150	422
Oconto	-	833	159	7,458	9,836	931	13	9	1,005	26,553	454	931
Oneida	-	5,246	1,551	8,854	8,411	1,899	2,772	1,260	5,730	49,455	270	9,700
Shawano	-	36	340	372	2,115	208	35	203	429	17,217	3	96
Vilas	-	3,819	600	15,354	4,090	2,105	1,832	272	2,621	55,638	359	3,738
Total	176	31,494	28,136	64,843	59,952	10,396	12,344	3,256	27,667	393,353	4,033	27,103
NORTHWEST												
Ashland	-	3,186	299	1,487	2,122	693	4,182	786	2,186	34,599	9	1,059
Barron	-	14	11	1,350	1,246	47	120	860	676	9,428	5	554
Bayfield	-	1,308	33	49,784	7,091	578	949	56	2,887	84,367	11	1,444
Burnett	-	180	14	36,052	9,243	127	93	13	1,162	23,694	1	317
Douglas	-	10,356	-	57,276	14,061	176	2,421	133	2,127	67,165	-	335
Iron	-	4,158	895	1,665	914	326	2,980	76	4,127	77,873	313	5,074
Polk	-	13	-	5,631	729	28	88	-	336	16,399	-	327
Price	-	6,488	843	1,066	4,039	579	2,234	1,251	4,580	66,709	86	3,730
Rusk	-	408	305	910	1,418	361	747	646	3,624	53,066	44	3,573
Sawyer	-	2,371	178	3,785	8,216	652	968	683	3,779	53,241	14	2,459
Taylor	-	2,214	1,120	104	418	76	785	361	2,258	42,865	50	2,190
Washburn	-	700	19	18,318	11,082	276	208	6	1,977	43,623	6	1,399
Total	-	31,395	3,717	177,428	60,579	3,919	15,775	4,873	29,721	573,027	539	22,461
CENTRAL												
Adams	-	-	-	39,418	17,112	1,533	71	-	186	2,414	1	58
Chippewa	-	70	90	226	945	213	32	146	1,091	22,139	13	1,054
Clark	-	14	9	4,431	1,862	1,015	10	-	2,095	37,764	10	657
Eau Claire	-	2	-	15,431	4,286	701	219	-	836	14,728	5	314
Jackson	-	-	10	58,827	6,195	1,627	83	8	598	17,655	1	152
Juneau	-	5	-	29,853	7,561	556	-	-	291	2,569	-	45
Marathon	-	121	892	1,175	5,292	303	711	74	2,214	32,121	21	770
Marquette	-	-	-	1,092	9,666	475	24	-	53	261	-	11
Monroe	-	-	-	12,554	6,968	527	10	-	192	1,620	-	9
Portage	-	9	165	8,993	9,284	1,633	52	183	415	8,268	10	349
Waupaca	-	15	9	1,263	10,026	438	90	-	252	6,196	6	181
Waushara	-	-	-	1,806	22,720	1,679	86	8	192	1,374	-	37
Wood	-	5	42	15,165	3,244	962	43	-	697	15,403	3	158
Total	-	241	1,217	190,233	105,161	11,662	1,433	419	9,111	162,513	70	3,795

(Tabel 6 continued on next page)

(Table 6 continued)

Unit and county[1]	Species group											
	N. white-cedar	Balsam fir	Hemlock	Jack pine	Red pine	White pine	Spruce	Tamarack	Ash	Aspen	Balsam poplar	Basswood
SOUTHWEST												
Buffalo	-	-	-	20	1,083	290	-	-	11	4,722	-	2
Crawford	-	-	-	13	208	-	-	-	1	16	-	6
Dunn	-	-	-	795	3,844	127	115	-	415	5,673	3	384
Grant	-	-	-	14	3,582	42	-	-	16	-	-	-
Iowa	-	-	-	13	840	329	9	-	-	-	-	-
La Crosse	-	-	-	747	4,309	683	15	-	14	-	-	1
Lafayette	-	-	-	-	-	-	14	-	-	-	-	-
Pepin	-	-	-	77	783	138	71	-	3	514	-	1
Pierce	-	10	-	106	427	153	70	-	1	516	-	-
Richland	-	-	-	149	1,132	272	89	-	3	14	-	-
Sauk	-	-	-	1,596	3,987	912	17	-	21	262	-	14
St. Croix	-	-	-	1,075	3,444	76	160	-	-	4,326	-	-
Trempealeau	-	3	-	355	5,342	514	170	-	29	944	-	19
Vernon	-	-	-	48	445	97	-	-	4	-	-	1
Total	-	14	-	5,007	29,426	3,632	728	-	519	16,987	3	429
SOUTHEAST												
Brown	-	-	13	10	336	-	-	-	49	11,949	1,440	756
Calumet	-	-	-	-	21	-	-	-	4	-	-	-
Columbia	-	6	-	82	2,803	249	31	-	4	143	-	1
Dane	-	-	-	-	599	224	10	-	20	-	-	9
Dodge	-	-	-	-	149	398	72	-	2	-	-	1
Door	-	-	-	-	59	-	-	-	32	226	1	36
Fond Du Lac	-	-	-	12	-	-	-	-	-	-	-	-
Green	-	-	-	57	646	755	17	-	1	-	-	1
Green Lake	-	11	13	42	458	48	-	-	12	114	-	5
Jefferson	-	-	8	1,624	471	60	-	-	1	-	-	-
Kenosha	-	-	-	14	65	-	-	-	-	-	-	-
Kewaunee	-	-	13	-	45	14	-	-	58	99	-	8
Manitowoc	-	-	14	25	116	282	-	-	-	9	-	-
Milwaukee	-	-	-	16	11	-	-	-	-	-	-	-
Outagamie	-	-	-	-	496	45	14	6	38	778	-	1
Ozaukee	-	-	-	-	85	27	64	-	-	-	-	-
Rock	-	-	-	11	476	53	-	-	12	-	-	-
Sheboygan	-	-	-	-	60	-	-	-	-	-	-	-
Walworth	-	-	-	44	901	411	-	-	-	-	-	-
Washington	-	11	-	11	509	391	296	-	1	-	-	1
Waukesha	-	-	-	22	1,060	902	-	-	-	-	-	-
Winnebago	-	-	-	124	41	24	-	-	20	-	-	1
Total	-	29	59	2,094	9,409	3,883	503	6	255	13,318	1,441	820
State total	176	63,172	33,130	439,605	264,526	33,492	30,783	8,555	67,273	1,159,197	6,086	54,608

(Table 6 continued on next page)

(Table 6 continued)

Unit and county[1]	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Other hardwoods	All species
NORTHEAST												
Florence	14	4,946	654	11	443	-	11,066	6,523	798	141	226	72,346
Forest	168	12,036	1,871	30	5,358	-	27,403	20,029	3,395	1,923	869	139,745
Langlade	59	14,120	1,358	60	2,115	-	21,453	16,033	3,190	1,619	812	132,316
Lincoln	72	9,450	658	101	2,266	-	11,986	8,110	5,911	852	1,112	107,730
Marinette	10	7,873	696	20	54	-	11,046	7,427	1,696	706	332	133,085
Menominee	182	1,869	1,080	4	2,377	-	8,739	7,385	1,420	511	262	75,643
Oconto	23	7,965	521	7	674	-	7,766	4,899	745	204	177	71,164
Oneida	7	23,513	463	269	470	-	18,157	10,707	9,999	1,056	2,062	161,853
Shawano	22	308	190	2	687	-	1,469	1,349	292	175	23	25,572
Vilas	3	25,704	699	74	264	-	15,153	8,985	3,858	947	753	146,871
Total	561	107,784	8,190	578	14,708	-	134,238	91,447	31,304	8,135	6,628	1,066,324
NORTHWEST												
Ashland	3	7,057	428	9	351	-	11,005	8,325	2,864	1,165	622	82,438
Barron	-	1,993	27	5	17	-	1,988	2,849	1,128	149	225	22,691
Bayfield	2	22,313	565	11	214	-	9,893	9,249	4,034	1,559	404	196,751
Burnett	-	1,852	55	1	27	-	1,957	2,100	1,219	346	179	78,630
Douglas	1	15,217	105	-	79	-	2,050	4,816	913	541	74	177,846
Iron	5	10,487	932	106	392	-	20,228	12,417	5,951	1,022	1,271	151,210
Polk	-	1,280	7	-	5	-	632	1,129	469	93	62	27,230
Price	39	15,681	904	85	1,323	-	14,793	11,150	5,165	730	1,217	142,693
Rusk	23	10,628	701	44	976	-	15,827	11,646	4,472	1,400	965	111,785
Sawyer	10	21,502	1,309	14	675	-	18,039	15,590	3,491	1,637	839	139,451
Taylor	53	5,325	472	50	1,722	-	7,781	6,146	2,616	542	547	77,695
Washburn	1	7,435	219	6	100	-	5,542	9,525	1,829	550	320	103,142
Total	137	120,768	5,724	331	5,881	-	109,736	94,942	34,150	9,733	6,725	1,311,562
CENTRAL												
Adams	-	286	14	-	1	-	299	503	13,167	2,744	248	78,054
Chippewa	3	2,398	126	13	135	-	3,463	2,826	1,756	290	362	37,390
Clark	38	4,858	683	10	1,345	-	11,529	7,553	6,333	3,569	397	84,182
Eau Claire	-	2,461	157	5	118	-	3,552	2,697	5,028	2,648	196	53,382
Jackson	1	1,606	100	1	106	-	2,645	2,795	4,884	2,202	437	99,933
Juneau	-	497	11	-	8	-	829	758	8,983	2,545	39	54,550
Marathon	135	1,165	822	21	4,091	-	5,757	4,962	1,425	266	190	62,527
Marquette	-	97	10	-	3	-	200	165	548	290	12	12,909
Monroe	-	238	9	-	7	-	663	405	2,821	730	14	26,769
Portage	14	437	118	10	462	-	1,223	1,166	1,233	641	73	34,738
Waupaca	14	119	103	5	432	-	725	684	276	117	18	20,968
Waushara	-	186	29	-	11	-	363	349	2,469	438	43	31,791
Wood	3	1,002	169	3	121	-	2,474	1,679	1,107	663	103	43,046
Total	208	15,350	2,353	68	6,841	-	33,720	26,542	50,029	17,141	2,132	640,239

(Table 6 continued on next page)

(Table 6 continued)

Unit and county[1]	Beech	White birch	Yellow birch	Cotton-wood	Elm	Hickory	Hard maple	Soft maple	Red oak	White oak	Other hardwoods	All species
SOUTHWEST												
Buffalo	-	32	2	-	1	-	60	52	9	7	12	6,303
Crawford	-	1	-	-	-	-	4	3	104	37	-	393
Dunn	-	906	38	3	24	-	1,501	1,119	768	119	151	15,986
Grant	-	9	1	-	-	-	52	70	61	18	8	3,872
Iowa	-	-	-	-	-	-	-	-	-	-	-	1,190
La Crosse	-	15	-	-	-	-	9	209	277	39	49	6,367
Lafayette	-	-	-	-	-	-	-	-	-	-	-	14
Pepin	-	6	2	-	4	-	20	15	3	2	1	1,641
Pierce	-	2	-	-	-	-	4	3	1	-	-	1,294
Richland	-	3	-	-	-	-	14	8	10	7	1	1,703
Sauk	-	47	2	-	2	-	93	65	984	352	29	8,381
St. Croix	-	2	-	-	-	-	5	3	1	1	-	9,094
Trempealeau	-	70	4	-	3	-	144	100	272	167	10	8,145
Vernon	-	8	1	-	-	-	28	19	52	19	2	724
Total	-	1,103	51	3	34	-	1,934	1,666	2,542	768	264	65,109
SOUTHEAST												
Brown	5	69	13	1	7	-	189	397	31	14	10	15,289
Calumet	-	2	2	-	-	-	15	15	2	2	-	63
Columbia	-	8	-	-	-	-	15	9	777	479	2	4,610
Dane	-	36	-	-	-	-	37	17	43	-	8	1,003
Dodge	-	3	-	-	-	-	3	1	3	-	1	632
Door	-	1,104	4	-	-	-	126	66	56	2	12	1,726
Fond Du Lac	-	-	-	-	-	-	-	-	-	-	-	12
Green	-	3	-	-	-	-	4	2	94	10	2	1,592
Green Lake	-	19	-	-	-	-	26	15	47	4	4	818
Jefferson	-	1	-	-	-	-	4	4	1	-	-	2,175
Kenosha	-	-	-	-	-	-	-	-	-	-	-	79
Kewaunee	-	99	20	-	5	-	302	235	440	246	9	1,593
Manitowoc	-	-	-	-	-	-	-	-	-	-	-	446
Milwaukee	-	-	-	-	-	-	-	-	-	-	-	27
Outagamie	-	27	17	-	-	-	134	127	24	18	2	1,726
Ozaukee	-	-	-	-	-	-	-	-	-	-	-	176
Rock	-	-	-	-	-	-	-	54	-	-	37	643
Sheboygan	-	-	-	-	-	-	-	-	-	-	-	60
Walworth	-	-	-	-	-	-	-	-	-	-	-	1,356
Washington	-	3	-	-	-	-	3	1	3	-	-	1,231
Waukesha	-	-	-	-	-	-	-	-	-	-	-	1,984
Winnebago	-	16	9	-	-	-	79	74	79	54	-	521
Total	5	1,390	65	1	13	-	938	1,017	1,601	828	88	37,763
State total	911	246,395	16,383	981	27,477	-	280,566	215,614	119,626	36,605	15,837	3,120,997

[1] Includes only those counties that supplied pulpwood in 1994.

Rows and columns may not sum due to rounding.

Table 7.--Pulpwood receipts in Wisconsin by species group, 1946-1994

(In thousand standard cords, unpeeled) 1/

Year	Roundwood									Residue	
	Total	Pine	Balsam fir	Hemlock	Spruce	Cedar & tamarack	Aspen	Birch	Other hardwoods	Soft-woods	Hard-woods
1946	1,902	298	280	233	645	16	416	14	2/	2/	2/
1947	1,722	292	230	134	687	19	346	13	2/	2/	1
1948	1,741	307	279	136	663	5	333	17	2/	2/	1
1949	1,426	227	244	101	502	3	332	15	2/	2/	2
1950	1,442	244	238	91	441	3	387	10	21	1	6
1951	2,097	428	232	120	678	10	569	42	18	--	--
1952	2,059	365	288	131	732	6	490	32	15	--	--
1953	1,689	283	179	76	529	2	552	26	42	--	--
1954	1,919	298	228	125	608	5	566	40	49	--	--
1955	1,777	319	199	92	471	5	590	26	75	--	--
1956	2,136	397	195	143	445	9	754	27	166	--	--
1957	2,247	325	254	116	578	14	739	38	183	--	--
1958	1,866	318	200	90	479	18	583	19	159	--	--
1959	1,881	436	169	87	345	17	619	30	165	7	6
1960	2,114	388	176	97	389	26	785	31	208	7	7
1961	1,972	330	177	92	350	19	741	44	196	12	11
1962	2,124	395	155	99	317	19	784	49	206	51	49
1963	2,429	414	175	114	341	22	877	64	235	96	91
1964	2,271	350	139	110	314	20	855	62	233	96	92
1965	2,290	410	114	120	300	19	899	26	219	91	92
1966	2,701	473	139	162	301	11	1,112	44	270	100	89
1967	2,729	415	140	100	308	42	1,115	91	259	135	124
1968	2,226	405	100	86	200	33	860	59	205	160	118
1969	2,514	456	81	112	208	25	978	63	278	192	121
1970	2,821	498	111	118	208	43	1,088	81	333	189	152
1971	2,581	514	88	83	167	37	1,011	53	295	193	140
1972	2,450	443	82	69	181	31	902	48	354	198	142
1973	2,696	387	103	54	224	28	1,006	68	398	279	149
1974	3,135	508	133	69	161	36	1,109	115	558	257	189
1975	2,344	391	155	73	146	30	791	89	288	216	165
1976	2,713	437	137	66	121	34	926	133	486	256	117
1977	2,596	416	109	43	94	31	915	120	445	299	124
1978	2,676	491	99	50	82	25	888	145	450	301	145
1979 3/	3,067	567	115	39	76	21	999	178	548	332	192
1980	3,266	518	147	40	94	34	1,118	231	562	268	254
1981	3,154	512	135	31	86	31	1,182	189	477	252	259
1982	2,978	565	131	36	79	37	1,092	173	434	209	222
1983	3,114	470	114	43	65	27	1,220	217	502	222	234
1984	3,301	540	108	26	95	15	1,269	228	552	204	264
1985	3,104	500	97	39	80	4	1,250	202	494	198	240
1986	3,270	543	59	40	63	4	1,370	240	518	192	241
1987	3,130	538	45	46	73	3	1,199	220	592	157	257
1988	3,287	641	59	48	97	6	1,223	233	555	181	244
1989	3,339	627	60	45	104	6	1,247	274	582	150	244
1990	3,334	685	59	41	125	13	1,158	277	628	177	171
1991	3,311	766	50	33	95	9	1,181	206	539	174	258
1992	3,533	775	54	31	112	7	1,309	268	594	163	220
1993	3,525	789	55	26	102	10	1,207	224	693	160	259
1994	3,748	846	62	34	98	12	1,250	253	755	159	279

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Less than 500 cords.

3/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Rows and columns may not sum due to rounding.

Table 8.--Pulpwood receipts in Wisconsin by area of origin, 1960-1994

(In thousand standard cords, unpeeled) 1/

Year	All areas	Area of origin				
		Michigan	Wisconsin	Minnesota	Other States	Canada
1960	2,115	510	1,008	308	82	207
1961	1,972	464	1,050	240	44	174
1962	2,124	540	1,114	216	108	146
1963	2,429	628	1,262	221	153	165
1964	2,272	588	1,207	193	135	149
1965	2,290	608	1,225	159	135	163
1966	2,701	666	1,501	193	185	156
1967	2,729	660	1,387	299	234	149
1968	2,227	455	1,259	166	223	124
1969	2,513	537	1,412	188	257	119
1970	2,820	610	1,627	219	249	115
1971	2,581	567	1,502	188	234	90
1972	2,450	470	1,493	166	230	91
1973	2,697	418	1,671	194	291	123
1974	3,135	534	2,004	261	269	67
1975	2,344	449	1,460	178	177	80
1976	2,713	434	1,784	182	203	110
1977	2,596	407	1,713	154	227	95
1978	2,676	404	1,779	162	242	89
1979 2/	3,067	516	2,024	169	266	92
1980	3,266	490	2,298	216	170	92
1981	3,155	419	2,320	177	164	75
1982	2,979	396	2,231	179	131	42
1983	3,114	391	2,399	155	137	32
1984	3,301	442	2,534	184	134	7
1985	3,104	392	2,465	105	127	15
1986	3,270	369	2,693	69	116	23
1987	3,130	313	2,644	62	90	21
1988	3,288	311	2,771	79	102	25
1989	3,338	319	2,799	116	90	14
1990	3,334	313	2,768	127	107	19
1991	3,309	304	2,799	101	88	17
1992	3,534	323	2,997	105	103	6
1993	3,485	272	2,970	146	80	17
1994	3,747	310	3,167	164	81	25

1/ 128 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Includes logs, bolts, and wood residue used in manufacturing particleboard and waferboard after 1979.

Rows and columns may not sum due to rounding.

Table 9.--Pulpwood receipts in Wisconsin by species group and area of origin, 1994

(In thousand standard cords, unpeeled) 1/

Type of material and species group	Total receipts	Origin of material				
		Michigan	Minnesota	Wisconsin	Other U.S.	Canada
ROUNDWOOD						
SOFTWOODS						
Cedar	--	--	--	--	--	--
Balsam fir	62	13	*	49	--	--
Hemlock	35	3	--	32	--	--
Jack pine	538	88	15	433	--	2
Red pine	273	13	2	258	--	--
White pine	34	1	*	33	--	--
Spruce	98	29	37	28	--	4
Tamarack	12	1	3	8	--	--
Total	1,052	148	57	841	--	6
HARDWOODS						
Ash	67	3	1	63	--	--
Aspen	1,249	106	63	1,078	--	2
Balsam poplar	1	*	--	1	--	--
Basswood	51	2	1	48	--	--
Beech	1	--	--	1	--	--
White birch	239	6	36	197	--	*
Yellow birch	13	*	--	13	--	--
Cottonwood	1	--	--	1	--	--
Elm	27	*	--	27	--	--
Hickory	--	--	--	--	--	--
Hard maple	239	9	1	229	--	--
Soft maple	195	7	3	185	--	--
Red oak	119	3	*	116	--	--
White oak	38	1	--	37	--	--
Other hardwoods	16	1	--	15	--	--
Total	2,256	138	105	2,011	--	2
All species	3,308	286	162	2,852	--	8
RESIDUES 2/						
Softwood	160	3	1	58	81	17
Hardwood	282	22	*	257	*	3
Total	442	25	1	315	81	20
ALL MATERIAL	3,750	311	163	3,167	81	28

** = Less than 500 standard cords.*

1/ 129 cubic feet consisting of 79 cubic feet of wood and 49 cubic feet of bark and air space.

2/ Chippable mill residues such as slabs, edgings, etc. Roundwood chips are included in roundwood.

Rows and columns may not sum due to rounding.

Table 10.--Saw-log production and receipts in Wisconsin by species group, 1992 and 1994

(In thousand board feet) 1/

Species group	Production			Receipts		
	1992	1994	Change	1992	1994	Change
SOFTWOODS						
N. white-cedar	1,137	867	-270	1,054	876	-178
Redcedar	23	23	0	23	23	0
Balsam fir	144	592	448	174	755	581
Hemlock	3,595	4,678	1,083	4,057	4,958	901
Jack pine	11,166	14,341	3,175	4,890	8,418	3,528
Red pine	51,890	52,582	692	42,199	46,015	3,816
White pine	26,448	28,488	2,040	24,961	28,069	3,108
Spruce	444	1,216	772	394	1,947	1,553
Tamarack	26	42	16	42	73	31
Total	94,873	102,829	7,956	77,794	91,136	13,342
HARDWOODS						
Ash	13,851	19,315	5,464	13,895	19,476	5,581
Aspen	99,891	115,003	15,112	105,024	123,572	18,548
Balsam poplar	78	90	12	78	107	29
Basswood	34,729	38,574	3,845	37,702	44,002	6,300
Beech	2,306	1,446	-860	1,727	1,439	-288
White birch	22,916	22,267	-649	25,839	23,545	-2,294
Yellow birch	3,952	4,937	985	4,793	5,585	792
Cottonwood	1,259	1,442	183	1,225	1,070	-155
Elm	3,883	4,766	883	2,629	3,342	713
Hickory	154	2,435	2,281	--	2,285	2,285
Hard maple	63,170	70,098	6,928	71,990	77,924	5,934
Soft maple	30,421	37,896	7,475	32,679	39,456	6,777
Red oak	166,953	167,561	608	171,630	167,782	-3,848
White oak	43,526	50,652	7,126	44,267	50,427	6,160
Walnut	1,234	697	-537	1,120	519	-601
Hackberry	2,204	205	-1,999	2,319	187	-2,132
Butternut	373	274	-99	567	274	-293
Black cherry	1,788	4,705	2,917	1,795	4,859	3,064
Willow	1	49	48	1	0	-1
Other hardwoods	920	20	-900	2	4	2
Total	493,609	542,432	48,823	519,282	565,855	46,573
All species	588,482	645,261	56,779	597,076	656,991	59,915

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 11.--Saw-log production by Forest Survey Unit, species group, and State of destination, Wisconsin, 1994

(Thousand board feet) 1/

Species	ALL UNITS					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Balsam fir	592	--	--	--	--	592
Redcedar	23	--	--	--	--	23
Tamarack	42	--	--	--	--	42
Spruce	1,216	--	--	4	149	1,063
Jack pine	14,341	--	--	--	7,696	6,645
Red pine	52,582	--	--	--	11,390	41,191
White pine	28,488	--	--	--	2,760	25,728
N. white-cedar	867	--	--	5	--	862
Hemlock	4,678	--	--	2	--	4,676
Total	102,829	--	--	11	21,996	80,822
HARDWOODS						
Soft maple	37,896	7	273	985	--	36,631
Hard maple	70,098	--	505	2,272	32	67,288
White birch	22,267	--	--	1,231	--	21,036
Yellow birch	4,937	--	--	327	--	4,610
Hickory	2,435	--	251	--	--	2,184
Hackberry	205	--	54	--	--	151
Beech	1,446	--	--	34	--	1,412
Ash	19,315	113	315	195	--	18,693
Butternut	274	--	--	--	--	274
Black walnut	697	22	337	--	--	339
Cottonwood	1,442	126	282	--	--	1,033
Balsam poplar	90	--	--	--	--	90
Aspen	115,003	--	119	1,717	34	113,134
Black cherry	4,705	48	60	81	--	4,516
Red oak group	167,561	446	3,813	3,483	23	159,796
White oak group	50,652	604	1,645	--	32	48,371
Willow	49	--	49	--	--	--
Basswood	38,574	28	692	295	--	37,560
Elm	4,766	1,557	116	9	--	3,085
Other hardwoods	20	18	--	--	--	2
Total	542,432	2,967	8,511	10,628	121	520,205
All species	645,262	2,967	8,511	10,639	22,117	601,027

(Table 11 contined on next page)

(Table 11 contined)

Species	CENTRAL UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Balsam fir	6	--	--	--	--	6
Spruce	9	--	--	--	--	9
Jack pine	484	--	--	--	--	484
Red pine	4,525	--	--	--	--	4,525
White pine	8,355	--	--	--	--	8,355
N. white-cedar	42	--	--	--	--	42
Hemlock	79	--	--	--	--	79
Total	13,501	--	--	--	--	13,501
HARDWOODS						
Soft maple	12,281	--	--	--	--	12,281
Hard maple	11,457	--	--	--	--	11,457
White birch	2,083	--	--	--	--	2,083
Yellow birch	403	--	--	--	--	403
Hickory	364	--	--	--	--	364
Hackberry	1	--	--	--	--	1
Beech	69	--	--	--	--	69
Ash	4,210	--	--	--	--	4,210
Butternut	62	--	--	--	--	62
Cottonwood	136	--	--	--	--	136
Balsam poplar	4	--	--	--	--	4
Aspen	20,345	--	--	--	--	20,345
Black cherry	796	--	--	--	--	796
Red oak group	53,272	--	--	--	--	53,272
White oak group	13,454	--	--	--	--	13,454
Basswood	6,307	--	--	--	--	6,307
Elm	346	--	--	--	--	346
Total	125,588	--	--	--	--	125,588
All species	139,090	--	--	--	--	139,090

(Table 11 continued on next page)

(Table 11 contined)

Species	NORTHEAST UNIT Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Balsam fir	383	--	--	--	--	383
Tamarack	27	--	--	--	--	27
Spruce	725	--	--	--	--	725
Jack pine	4,522	--	--	--	--	4,522
Red pine	18,401	--	--	--	--	18,401
White pine	8,992	--	--	--	--	8,992
N. white-cedar	311	--	--	5	--	306
Hemlock	4,085	--	--	--	--	4,085
Total	37,447	--	--	5	--	37,442
HARDWOODS						
Soft maple	10,332	--	--	364	--	9,967
Hard maple	29,784	--	--	749	--	29,034
White birch	10,874	--	--	119	--	10,756
Yellow birch	2,805	--	--	68	--	2,737
Hickory	163	--	--	--	--	163
Beech	1,041	--	--	34	--	1,007
Ash	5,048	--	--	94	--	4,954
Butternut	54	--	--	--	--	54
Cottonwood	*	--	--	--	--	*
Balsam poplar	60	--	--	--	--	60
Aspen	54,012	--	--	339	--	53,672
Black cherry	990	--	--	1	--	989
Red oak group	13,128	--	--	141	--	12,987
White oak group	3,488	--	--	--	--	3,488
Basswood	11,969	--	--	145	--	11,823
Elm	1,018	--	--	9	--	1,010
Total	144,765	--	--	2,064	--	142,702
All species	182,212	--	--	2,069	--	180,143

(Table 11 continued on next page)

(Table 11 contined)

Species	NORTHWEST UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Balsam fir	181	--	--	--	--	181
Tamarack	4	--	--	--	--	4
Spruce	460	--	--	4	149	307
Jack pine	9,330	--	--	--	7,696	1,634
Red pine	27,437	--	--	--	11,390	16,046
White pine	8,803	--	--	--	2,760	6,043
N. white-cedar	21	--	--	--	--	21
Hemlock	426	--	--	2	--	424
Total	46,662	--	--	6	21,996	24,660
HARDWOODS						
Soft maple	7,787	--	--	620	--	7,167
Hard maple	15,043	--	--	1,522	--	13,521
White birch	8,665	--	--	1,112	--	7,553
Yellow birch	1,704	--	--	259	--	1,445
Hickory	34	--	--	--	--	34
Hackberry	79	--	--	--	--	79
Beech	26	--	--	--	--	26
Ash	4,635	--	--	101	--	4,534
Butternut	92	--	--	--	--	92
Black walnut	1	--	--	--	--	1
Cottonwood	5	--	--	--	--	5
Aspen	33,391	--	--	1,377	33	31,981
Black cherry	146	--	--	80	--	66
Red oak group	30,550	--	--	3,342	*	27,208
White oak group	3,997	--	--	--	--	3,997
Basswood	11,242	--	--	150	--	11,092
Elm	432	--	--	--	--	432
Total	117,830	--	--	8,564	33	109,234
All species	164,493	--	--	8,570	22,029	133,894

(Table 11 continued on next page)

(Table 11 contined)

Species	SOUTHEAST UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Tamarack	11	--	--	--	--	11
Spruce	12	--	--	--	--	12
Jack pine	2	--	--	--	--	2
Red pine	145	--	--	--	--	145
White pine	793	--	--	--	--	793
N. white-cedar	494	--	--	--	--	494
Hemlock	89	--	--	--	--	89
Total	1,545	--	--	--	--	1,545
HARDWOODS						
Soft maple	3,158	2	--	--	--	3,156
Hard maple	2,623	--	--	--	--	2,623
White birch	208	--	--	--	--	208
Yellow birch	18	--	--	--	--	18
Hickory	252	--	--	--	--	252
Hackberry	23	--	--	--	--	23
Beech	310	--	--	--	--	310
Ash	2,156	48	--	--	--	2,108
Butternut	17	--	--	--	--	17
Black walnut	79	3	--	--	--	77
Cottonwood	323	30	--	--	--	294
Balsam poplar	18	--	--	--	--	18
Aspen	1,011	--	--	--	--	1,011
Black cherry	372	2	--	--	--	369
Red oak group	8,738	--	--	--	--	8,738
White oak group	4,605	--	--	--	--	4,605
Basswood	1,276	2	--	--	--	1,274
Elm	405	--	--	--	--	405
Other hardwoods	5	3	--	--	--	2
Total	25,597	90	--	--	--	25,507
All species	27,142	90	--	--	--	27,052

(Table 11 continued on next page)

(Table 11 contined)

Species	SOUTHWEST UNIT					
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin
SOFTWOODS						
Balsam fir	21	--	--	--	--	21
Redcedar	23	--	--	--	--	23
Spruce	9	--	--	--	--	9
Jack pine	3	--	--	--	--	3
Red pine	2,074	--	--	--	--	2,074
White pine	1,544	--	--	--	--	1,544
Total	3,674	--	--	--	--	3,674
HARDWOODS						
Soft maple	4,337	4	273	--	--	4,059
Hard maple	11,190	--	505	--	32	10,652
White birch	437	--	--	--	--	437
Yellow birch	8	--	--	--	--	8
Hickory	1,623	--	251	--	--	1,371
Hackberry	101	--	54	--	--	47
Ash	3,267	64	315	--	--	2,887
Butternut	49	--	--	--	--	49
Black walnut	617	19	337	--	--	261
Cottonwood	977	97	282	--	--	598
Balsam poplar	9	--	--	--	--	9
Aspen	6,245	--	119	--	1	6,125
Black cherry	2,402	45	60	--	--	2,296
Red oak group	61,873	446	3,813	--	23	57,591
White oak group	25,109	604	1,645	--	32	22,827
Willow	49	--	49	--	--	--
Basswood	7,781	26	692	--	--	7,063
Elm	2,565	1,557	116	--	--	892
Other hardwoods	15	15	--	--	--	--
Total	128,651	2,877	8,511	--	88	117,174
All species	132,325	2,877	8,511	--	88	120,848

** = Less than 500 board feet.*

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 12.--Saw-log production by Forest Survey Unit, county, and species group, Wisconsin, 1994

(Thousand board feet) 1/

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hem-lock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory
CENTRAL UNIT															
Adams	--	--	--	--	90	332	208	--	--	629	269	142	270	0	3
Chippewa	--	--	--	--	--	718	508	--	--	1,226	1,488	1,496	295	26	5
Clark	--	--	--	--	--	404	599	--	--	1,003	1,674	804	435	17	8
Eau Claire	--	--	--	--	2	85	60	--	--	147	685	293	59	1	13
Jackson	--	--	--	--	100	361	906	--	--	1,368	533	192	191	1	79
Juneau	--	--	--	--	5	573	946	--	--	1,524	438	350	60	6	44
Marathon	6	--	--	3	184	358	714	1	57	1,324	3,854	5,015	427	268	26
Marquette	--	--	--	--	--	--	43	--	--	43	18	88	2	--	6
Monroe	--	--	--	--	--	16	1,666	--	--	1,683	278	704	41	--	100
Portage	--	--	--	--	4	634	1,051	--	--	1,688	926	417	140	55	17
Waupaca	--	--	--	7	--	337	780	41	22	1,187	1,069	1,655	112	25	56
Waushara	--	--	--	--	--	402	293	--	--	696	200	128	14	--	5
Wood	--	--	--	--	99	305	581	--	--	984	850	173	37	2	1
Total	6	--	--	9	484	4,525	8,355	42	79	13,501	12,281	11,457	2,083	403	364
NORTHEAST UNIT															
Florence	5	--	4	93	157	747	202	4	432	1,645	188	1,235	1,103	282	--
Forest	106	--	3	348	258	4,792	620	22	1,588	7,737	578	6,747	1,201	624	2
Langlade	36	--	--	6	81	994	169	--	79	1,365	1,494	5,633	1,083	211	15
Lincoln	27	--	6	--	43	1,033	1,117	--	*	2,227	880	1,196	684	54	1
Marinette	9	--	--	178	687	2,553	455	25	249	4,155	1,813	2,211	2,530	362	15
Menominee	--	--	--	--	--	96	2,388	8	1,479	3,971	1,469	3,803	150	579	40
Oconto	13	--	--	17	196	1,399	409	--	4	2,038	1,716	1,795	1,810	321	13
Oneida	111	--	--	13	356	3,731	1,510	5	164	5,890	658	1,046	978	105	--
Shawano	*	--	1	1	--	92	553	244	89	980	979	4,163	192	81	78
Vilas	76	--	14	69	2,745	2,963	1,570	4	--	7,440	557	1,954	1,142	186	--
Total	383	--	27	725	4,522	18,401	8,992	311	4,085	37,447	10,332	29,784	10,874	2,805	163
NORTHWEST UNIT															
Ashland	56	--	1	178	246	1,573	1,134	11	1	3,200	624	1,769	805	338	1
Barron	--	--	1	--	1	32	256	--	--	290	896	1,307	410	10	8
Bayfield	34	--	--	149	3,036	11,767	3,228	1	4	18,219	559	620	1,470	148	1
Burnett	--	--	--	--	2,232	2,332	593	--	--	5,157	148	169	125	--	--
Douglas	1	--	--	1	2,175	3,722	371	1	--	6,271	4	6	265	3	--
Iron	19	--	--	21	53	290	89	--	2	475	852	2,207	711	345	--
Polk	--	--	--	--	27	432	67	--	--	526	155	788	102	3	2
Price	52	--	2	40	18	1,877	95	5	162	2,251	487	1,426	664	139	--
Rusk	--	--	--	2	--	154	134	--	48	338	1,448	2,734	1,120	122	8
Sawyer	14	--	--	46	230	3,080	2,594	--	162	6,125	751	2,456	1,826	389	6
Taylor	5	--	--	16	--	103	132	--	47	303	1,539	1,231	689	94	8
Washburn	--	--	--	8	1,312	2,076	110	2	--	3,508	324	331	478	113	--
Total	181	--	4	460	9,330	27,437	8,803	21	426	46,662	7,787	15,043	8,665	1,704	34

(Table 12 continued on next page)

(Table 12 continued)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hem-lock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory
SOUTHEAST UNIT															
Brown	--	--	--	--	--	--	112	91	8	210	215	321	18	1	16
Calumet	--	--	--	3	--	--	19	22	--	44	51	86	6	--	14
Columbia	--	--	--	--	--	--	75	--	--	75	61	112	--	--	45
Dane	--	--	--	1	--	3	29	1	--	35	38	58	--	--	63
Dodge	--	--	--	--	--	2	21	30	--	54	275	130	--	--	35
Door	--	--	--	--	2	45	59	95	2	204	140	64	60	11	5
Fond Du Lac	--	--	--	1	--	--	--	--	--	1	92	92	--	--	2
Green	--	--	--	--	--	8	11	--	--	18	5	133	--	--	--
Green Lake	--	--	--	--	--	14	32	1	--	47	194	90	12	*	21
Jefferson	--	--	--	--	--	--	--	--	--	--	86	131	--	--	27
Kewaunee	--	--	11	--	--	--	47	88	28	174	331	54	22	5	--
Manitowoc	--	--	--	4	--	66	242	130	40	481	444	412	35	--	12
Milwaukee	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Outagamie	--	--	--	--	--	5	65	26	11	107	759	294	40	--	5
Ozaukee	--	--	--	--	--	--	--	1	--	1	110	60	--	--	--
Rock	--	--	--	1	--	1	1	1	--	6	6	15	2	--	--
Sheboygan	--	--	--	1	--	--	58	5	--	64	132	371	1	1	1
Walworth	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	*	--	*	121	87	--	--	--
Waukesha	--	--	--	--	--	--	--	2	--	2	33	37	--	--	--
Winnebago	--	--	--	--	--	--	22	--	--	22	64	77	11	--	5
Total	--	--	11	12	2	145	793	494	89	1,545	3,158	2,623	208	18	252
SOUTHWEST UNIT															
Buffalo	--	--	--	--	--	--	174	--	--	174	644	397	101	--	181
Crawford	--	--	--	--	--	3	8	--	--	11	327	1,063	*	--	230
Dunn	--	--	--	--	--	779	158	--	--	936	912	1,321	102	7	28
Grant	--	--	--	--	--	544	100	--	--	644	423	949	--	--	178
Iowa	--	--	--	--	--	68	329	--	--	397	107	310	2	--	120
La Crosse	--	--	--	--	--	--	--	--	--	--	88	195	52	--	84
Lafayette	--	--	--	--	--	3	5	--	--	7	1	7	--	--	2
Pepin	--	--	--	--	--	13	173	--	--	185	89	217	18	--	11
Pierce	21	--	--	9	3	3	3	--	--	39	61	1,221	15	--	18
Richland	--	--	--	--	--	24	53	--	--	77	341	2,465	0	--	272
Sauk	--	10	--	--	--	366	168	--	--	543	755	887	12	*	207
St. Croix	--	13	--	--	--	202	32	--	--	247	69	242	16	--	19
Trempealeau	--	--	--	--	--	--	111	--	--	111	270	106	118	--	68
Vernon	--	--	--	--	--	70	231	--	--	301	251	1,811	1	--	205
Total	21	23	--	9	3	2,074	1,544	--	--	3,674	4,337	11,190	437	8	1,623
State total	592	23	42	1,216	14,341	52,582	28,488	867	4,678	102,829	37,896	70,098	22,267	4,937	2,435

(Table 12 continued on next page)

(Table 12 contined)

Unit and county	Hack-berry	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other Hard-woods	Total hard-woods	All species
CENTRAL UNIT																	
Adams	--	--	73	22	--	22	--	236	64	2,462	326	--	41	27	--	3,956	4,585
Chippewa	1	--	610	6	--	--	--	3,834	5	3,718	1,459	--	895	46	--	13,884	15,110
Clark	--	--	353	3	--	--	--	3,812	20	4,171	1,823	--	618	59	--	13,796	14,799
Eau Claire	--	--	51	2	--	2	--	887	16	2,402	659	--	142	6	--	5,217	5,364
Jackson	--	--	37	3	--	11	--	1,291	63	6,970	1,812	--	196	40	--	11,418	12,786
Juneau	--	--	191	*	--	--	4	629	79	3,672	1,082	--	284	56	--	6,894	8,418
Marathon	--	14	1,429	16	--	1	--	4,073	66	4,781	496	--	2,486	31	--	22,983	24,306
Marquette	--	--	6	--	--	--	--	25	2	1,799	345	--	11	--	--	2,302	2,345
Monroe	--	--	794	--	--	10	--	1,165	436	11,286	3,168	--	639	51	--	18,672	20,354
Portage	--	--	261	2	--	--	--	2,215	23	3,597	571	--	329	12	--	8,567	10,255
Waupaca	--	56	324	7	--	60	--	1,222	18	2,818	482	--	417	11	--	8,333	9,520
Waushara	--	--	15	--	--	11	--	128	1	3,122	630	--	85	1	--	4,340	5,036
Wood	--	--	67	1	--	20	--	830	1	2,475	601	--	165	5	--	5,228	6,212
Total	1	69	4,210	62	--	136	4	20,345	796	53,272	13,454	--	6,307	346	--	125,588	139,090
NORTHEAST UNIT																	
Florence	--	--	44	1	--	--	--	2,693	15	164	29	--	534	11	--	6,299	7,944
Forest	--	10	2,335	16	--	--	--	10,350	289	366	57	--	3,566	135	--	26,275	34,012
Langlade	--	16	416	14	--	--	--	5,540	167	1,570	161	--	2,431	94	--	18,845	20,210
Lincoln	--	2	445	*	--	--	--	2,837	10	592	20	--	747	13	--	7,481	9,708
Marinette	--	42	665	1	--	*	60	10,670	32	2,926	2,070	--	1,025	276	--	24,698	28,853
Menominee	--	778	16	--	--	--	--	1,291	336	1,556	42	--	1,569	88	--	11,717	15,687
Oconto	--	2	200	*	--	--	--	5,001	7	1,699	700	--	469	275	--	14,007	16,045
Oneida	--	--	301	--	--	--	--	5,600	21	1,041	115	--	234	39	--	10,138	16,027
Shawano	--	192	523	18	--	--	--	2,121	89	2,346	200	--	1,057	42	--	12,083	13,062
Vilas	--	--	103	3	--	--	--	7,909	24	868	95	--	337	46	--	13,224	20,664
Total	--	1,041	5,048	54	--	*	60	54,012	990	13,128	3,488	--	11,969	1,018	--	144,765	182,212
NORTHWEST UNIT																	
Ashland	--	--	291	--	--	--	--	1,801	4	1,738	52	--	1,228	33	--	8,684	11,884
Barron	3	--	158	19	1	1	--	2,502	11	3,823	1,052	--	457	35	--	10,692	10,983
Bayfield	--	--	144	7	--	--	--	2,233	4	3,886	119	--	1,227	50	--	10,467	28,686
Burnett	--	--	25	3	--	1	--	1,841	2	1,744	578	--	157	25	--	4,816	9,974
Douglas	--	--	5	--	--	--	--	1,180	--	1,033	1	--	110	--	--	2,607	8,878
Iron	--	--	290	8	--	--	--	1,417	81	1,427	33	--	257	23	--	7,649	8,124
Polk	--	--	152	3	--	3	--	1,735	4	2,732	498	--	251	20	--	6,448	6,974
Price	--	--	485	--	--	--	--	3,826	10	556	126	--	1,410	46	--	9,175	11,426
Rusk	61	--	994	37	--	--	--	4,903	18	4,558	664	--	2,256	70	--	18,993	19,331
Sawyer	--	--	1,106	7	--	--	--	5,381	10	3,969	183	--	2,013	61	--	18,160	24,286
Taylor	--	--	839	1	--	--	--	2,105	2	2,045	399	--	1,694	32	--	10,678	10,981
Washburn	15	26	148	8	--	--	--	4,466	2	3,038	292	--	181	38	--	9,460	12,969
Total	79	26	4,635	92	1	5	--	33,391	146	30,550	3,997	--	11,242	432	--	117,830	164,493

(Table 12 continued on next page)

(Table 12 contined)

Unit and county	Hack-berry	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
SOUTHEAST UNIT																	
Brown	--	40	168	6	--	99	--	66	2	423	260	--	135	18	--	1,788	1,998
Calumet	--	1	67	--	--	8	--	21	2	80	45	--	29	4	--	416	460
Columbia	--	--	26	--	4	1	--	106	38	2,123	980	--	54	29	--	3,580	3,655
Dane	2	--	289	--	13	6	--	20	113	1,235	996	--	91	66	2	2,989	3,024
Dodge	*	--	251	--	*	--	--	8	38	375	299	--	145	67	--	1,622	1,675
Door	--	28	58	6	--	3	--	343	5	123	32	--	11	5	--	897	1,101
Fond Du Lac	1	--	58	--	2	--	--	6	12	145	94	--	17	2	--	524	526
Green	--	--	25	--	38	--	--	6	22	442	360	--	116	63	--	1,210	1,228
Green Lake	--	--	10	--	--	2	--	25	8	780	234	--	89	*	2	1,466	1,514
Jefferson	--	--	192	--	--	--	--	--	54	301	208	--	109	57	--	1,166	1,166
Kewaunee	--	49	117	--	--	16	17	26	--	72	18	--	27	16	--	770	944
Manitowoc	1	106	306	--	--	137	--	144	3	436	210	--	144	34	--	2,424	2,905
Milwaukee	--	--	2	--	1	--	--	--	--	3	--	--	--	--	--	6	6
Outagamie	--	43	183	--	--	32	--	224	23	542	86	--	60	9	2	2,303	2,410
Ozaukee	3	3	23	--	--	--	--	--	--	85	11	--	17	--	--	312	313
Rock	3	--	23	4	17	3	--	--	31	211	203	--	7	27	--	553	558
Sheboygan	3	38	274	--	--	13	*	7	13	715	302	--	147	2	--	2,020	2,084
Walworth	--	--	22	--	--	3	--	--	5	32	65	--	5	--	--	132	132
Washington	9	1	30	*	--	*	--	*	3	132	80	--	17	4	--	484	484
Waukesha	1	--	22	--	3	--	--	3	--	138	67	--	30	*	--	335	338
Winnebago	1	--	11	--	--	--	--	5	--	345	55	--	26	--	--	599	621
Total	23	310	2,156	17	79	323	18	1,011	372	8,738	4,605	--	1,276	405	5	25,597	27,142
SOUTHWEST UNIT																	
Buffalo	18	--	55	--	*	291	--	1,790	377	11,479	3,172	--	481	188	1	19,177	19,351
Crawford	9	--	378	--	86	--	--	280	212	5,590	2,073	--	830	347	1	11,424	11,435
Dunn	--	--	471	30	--	54	2	836	101	3,778	1,172	--	899	169	2	9,883	10,819
Grant	54	--	321	1	289	299	--	273	92	5,787	3,390	49	842	320	--	13,267	13,911
Iowa	*	--	102	*	87	--	--	131	126	2,990	1,753	--	253	256	2	6,239	6,636
La Crosse	11	--	188	--	13	9	--	162	208	4,398	1,391	--	332	128	--	7,258	7,258
Lafayette	--	--	24	--	12	--	--	1	11	133	195	--	32	1	--	421	428
Pepin	--	--	42	--	--	21	--	240	17	1,185	459	--	177	17	--	2,492	2,677
Pierce	--	--	286	1	--	76	--	261	25	1,819	1,327	--	651	164	--	5,924	5,963
Richland	--	--	496	--	55	--	3	334	227	6,764	3,024	--	918	390	2	15,292	15,369
Sauk	3	--	269	15	14	--	3	864	507	6,055	2,597	--	649	259	2	13,099	13,642
St. Croix	--	--	25	1	--	12	--	123	5	1,071	260	--	261	20	--	2,123	2,371
Trempealeau	2	--	2	1	1	201	--	414	266	5,027	1,671	--	157	48	2	8,352	8,463
Vernon	5	--	607	--	59	16	--	535	228	5,796	2,624	--	1,300	257	3	13,700	14,001
Total	101	--	3,267	49	617	977	9	6,245	2,402	61,873	25,109	49	7,781	2,565	15	128,651	132,325
State total	205	1,446	19,315	274	697	1,442	90	115,003	4,705	167,561	50,652	49	38,574	4,766	20	542,432	645,262

** = Less than 500 board feet*

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 13.--Saw-log receipts in Wisconsin by Forest Survey Unit, species group, and State of origin, 1994

(Thousand board feet) 1/

ALL UNITS

Species	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
SOFTWOODS								
Balsam fir	755	--	--	163	--	592	--	--
Redcedar	23	--	--	--	--	23	--	--
Tamarack	73	--	--	32	--	42	--	--
Spruce	1,947	--	--	884	--	1,063	--	--
Jack pine	8,418	--	--	1,773	--	6,645	--	--
Red pine	46,015	--	--	4,823	--	41,191	--	--
White pine	28,069	--	--	2,342	--	25,728	--	--
N. white-cedar	876	--	--	14	--	862	--	--
Hemlock	4,958	--	--	282	--	4,676	--	--
Total	91,136	--	--	10,314	--	80,822	--	--
HARDWOODS								
Soft maple	39,456	--	100	2,603	95	36,631	--	27
Hard maple	77,924	--	1,000	9,458	164	67,288	--	14
White birch	23,545	--	--	2,464	5	21,036	--	40
Yellow birch	5,585	--	--	963	5	4,610	--	8
Hickory	2,285	50	20	--	31	2,184	--	--
Hackberry	187	--	1	--	35	151	--	--
Beech	1,439	--	--	27	--	1,412	--	--
Ash	19,476	54	121	552	54	18,693	--	3
Butternut	274	--	--	--	--	274	--	--
Black walnut	519	--	163	--	17	339	--	--
Cottonwood	1,070	--	1	8	27	1,033	--	--
Balsam poplar	107	--	--	17	--	90	--	--
Aspen	123,572	50	30	10,308	50	113,134	--	--
Black cherry	4,859	165	27	126	25	4,516	--	--
Red oak group	167,782	1,224	1,128	1,186	3,497	159,796	864	88
White oak group	50,427	324	870	126	729	48,371	--	7
Black locust	2	--	--	--	2	--	--	--
Basswood	44,002	43	406	4,627	1,366	37,560	--	--
Elm	3,342	--	90	29	135	3,085	--	4
Other hardwoods	2	--	--	--	--	2	--	--
Total	565,855	1,910	3,958	32,494	6,237	520,205	864	188
All species	656,991	1,910	3,958	42,807	6,237	601,027	864	188

(Table 13 continued on next page)

(Table 13 continued)

Species	CENTRAL UNIT							
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
SOFTWOODS								
Jack pine	391	--	--	--	--	391	--	--
Red pine	2,174	--	--	--	--	2,174	--	--
White pine	6,977	--	--	--	--	6,977	--	--
N. white-cedar	68	--	--	--	--	68	--	--
Hemlock	829	--	--	216	--	613	--	--
Total	10,439	--	--	216	--	10,223	--	--
HARDWOODS								
Soft maple	11,415	--	--	--	15	11,400	--	--
Hard maple	6,716	--	--	--	17	6,699	--	--
White birch	935	--	--	--	--	935	--	--
Yellow birch	378	--	--	5	5	368	--	--
Hickory	196	--	--	--	--	196	--	--
Hackberry	20	--	--	--	--	20	--	--
Beech	22	--	--	--	--	22	--	--
Ash	3,868	--	10	40	39	3,779	--	--
Butternut	48	--	--	--	--	48	--	--
Black walnut	29	--	--	--	--	29	--	--
Cottonwood	52	--	--	--	--	52	--	--
Aspen	21,675	--	--	10	26	21,639	--	--
Black cherry	261	--	--	--	--	261	--	--
Red oak group	38,092	--	108	--	75	36,991	864	54
White oak group	8,844	--	--	--	38	8,806	--	--
Basswood	5,636	--	--	--	182	5,454	--	--
Elm	162	--	--	--	--	162	--	--
Total	98,348	--	118	55	397	96,860	864	54
All species	108,787	--	118	271	397	107,083	864	54

(Table 13 continued on next page)

(Table 13 continued)

Species	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
				NORTHEAST UNIT				
SOFTWOODS								
Balsam fir	703	--	--	163	--	540	--	--
Tamarack	58	--	--	32	--	27	--	--
Spruce	1,901	--	--	884	--	1,017	--	--
Jack pine	7,091	--	--	1,773	--	5,318	--	--
Red pine	15,737	--	--	2,362	--	13,376	--	--
White pine	13,952	--	--	2,223	--	11,729	--	--
N. white-cedar	320	--	--	14	--	306	--	--
Hemlock	4,042	--	--	66	--	3,976	--	--
Total	43,805	--	--	7,517	--	36,288	--	--
HARDWOODS								
Soft maple	15,847	--	--	2,145	--	13,675	--	27
Hard maple	42,047	--	--	7,936	--	34,098	--	14
White birch	17,395	--	--	2,282	--	15,072	--	40
Yellow birch	4,033	--	--	719	--	3,307	--	8
Hickory	231	--	--	--	--	231	--	--
Beech	1,089	--	--	27	--	1,062	--	--
Ash	5,860	--	--	312	--	5,546	--	3
Butternut	125	--	--	--	--	125	--	--
Cottonwood	2	--	--	--	--	2	--	--
Balsam poplar	77	--	--	17	--	60	--	--
Aspen	66,565	--	--	10,196	--	56,369	--	--
Black cherry	1,222	--	--	61	--	1,161	--	--
Red oak group	22,491	--	--	835	--	21,622	--	34
White oak group	5,252	--	--	90	--	5,156	--	7
Basswood	14,649	--	--	1,489	--	13,160	--	--
Elm	1,546	--	--	24	--	1,518	--	4
Total	198,430	--	--	26,132	--	172,165	--	134
All species	242,235	--	--	33,649	--	208,453	--	134

(Table 13 continued on next page)

(Table 13 continued)

Species	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
				NORTHWEST UNIT				
SOFTWOODS								
Balsam fir	52	--	--	--	--	52	--	--
Tamarack	4	--	--	--	--	4	--	--
Spruce	34	--	--	--	--	34	--	--
Jack pine	936	--	--	--	--	936	--	--
Red pine	26,464	--	--	2,397	--	24,068	--	--
White pine	1,534	--	--	32	--	1,501	--	--
N. white-cedar	19	--	--	--	--	19	--	--
Hemlock	9	--	--	--	--	9	--	--
Total	29,053	--	--	2,429	--	26,624	--	--
HARDWOODS								
Soft maple	4,276	--	--	458	23	3,795	--	--
Hard maple	11,981	--	--	1,505	81	10,395	--	--
White birch	4,695	--	--	181	--	4,514	--	--
Yellow birch	1,108	--	--	239	--	869	--	--
Hickory	13	--	--	--	--	13	--	--
Hackberry	80	--	--	--	--	80	--	--
Ash	3,298	--	--	196	1	3,101	--	--
Butternut	69	--	--	--	--	69	--	--
Black walnut	1	--	--	--	--	1	--	--
Cottonwood	6	--	--	--	--	6	--	--
Aspen	27,823	--	--	97	--	27,726	--	--
Black cherry	86	--	--	65	--	22	--	--
Red oak group	22,043	--	--	296	342	21,405	--	--
White oak group	2,872	--	--	14	76	2,782	--	--
Basswood	13,191	--	--	3,117	869	9,205	--	--
Elm	37	--	--	2	--	36	--	--
Total	91,582	--	--	6,170	1,392	84,020	--	--
All species	120,635	--	--	8,599	1,392	110,644	--	--

(Table 13 continued on next page)

(Table 13 continued)

Species	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
				SOUTHEAST UNIT				
SOFTWOODS								
Tamarack	11	--	--	--	--	11	--	--
Spruce	12	--	--	--	--	12	--	--
Red pine	186	--	--	65	--	121	--	--
White pine	2,996	--	--	86	--	2,910	--	--
N. white-cedar	470	--	--	--	--	470	--	--
Hemlock	78	--	--	--	--	78	--	--
Total	3,753	--	--	151	--	3,602	--	--
HARDWOODS								
Soft maple	3,651	--	--	--	--	3,651	--	--
Hard maple	5,033	--	--	--	--	5,033	--	--
White birch	199	--	--	--	--	199	--	--
Yellow birch	60	--	--	--	--	60	--	--
Hickory	295	--	--	--	--	295	--	--
Hackberry	27	--	1	--	--	26	--	--
Beech	328	--	--	--	--	328	--	--
Ash	2,664	54	11	--	--	2,599	--	--
Butternut	17	--	--	--	--	17	--	--
Black walnut	77	--	3	--	--	74	--	--
Cottonwood	365	--	1	--	--	364	--	--
Balsam poplar	18	--	--	--	--	18	--	--
Aspen	1,727	--	--	--	--	1,727	--	--
Black cherry	403	65	7	--	--	332	--	--
Red oak group	13,017	324	70	--	--	12,623	--	--
White oak group	5,528	324	70	--	--	5,134	--	--
Basswood	2,158	43	16	--	--	2,099	--	--
Elm	423	--	--	--	--	423	--	--
Other hardwoods	2	--	--	--	--	2	--	--
Total	35,990	810	180	--	--	35,000	--	--
All species	39,743	810	180	151	--	38,601	--	--

(Table 13 continued on next page)

(Table 13 continued)

Species	SOUTHWEST UNIT							
	Total	Illinois	Iowa	Michigan	Minnesota	Wisconsin	Ohio	Canada
SOFTWOODS								
Redcedar	23	--	--	--	--	23	--	--
Red pine	1,453	--	--	--	--	1,453	--	--
White pine	2,610	--	--	--	--	2,610	--	--
Total	4,086	--	--	--	--	4,086	--	--
HARDWOODS								
Soft maple	4,267	--	100	--	57	4,110	--	--
Hard maple	12,147	--	1,000	17	66	11,064	--	--
White birch	322	--	--	--	5	317	--	--
Yellow birch	5	--	--	--	--	5	--	--
Hickory	1,550	50	20	--	31	1,449	--	--
Hackberry	59	--	--	--	35	25	--	--
Ash	3,786	--	100	4	14	3,668	--	--
Butternut	16	--	--	--	--	16	--	--
Black walnut	412	--	160	--	17	235	--	--
Cottonwood	645	--	--	8	27	609	--	--
Balsam poplar	13	--	--	--	--	13	--	--
Aspen	5,781	50	30	5	24	5,673	--	--
Black cherry	2,887	100	20	1	25	2,741	--	--
Red oak group	72,140	900	950	55	3,080	67,155	--	--
White oak group	27,931	--	800	23	615	26,493	--	--
Black locust	2	--	--	--	2	--	--	--
Basswood	8,367	--	390	21	314	7,642	--	--
Elm	1,175	--	90	3	135	946	--	--
Total	141,505	1,100	3,660	137	4,448	132,160	--	--
All species	145,591	1,100	3,660	137	4,448	136,246	--	--

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 14.--Veneer log and bolt production and receipts in Wisconsin for selected years, 1946-1994

(In thousand board feet) 1/

Year	Production	Receipts
1946	29,267	68,116
1948	32,026	71,791
1950	26,652	62,935
1952	29,956	59,500
1954	27,109	59,573
1956	30,403	66,949
1958	23,740	43,063
1960	25,467	51,298
1963	21,919	37,517
1965	25,203	41,918
1966	23,782	43,104
1968	22,867	42,162
1969	21,037	37,571
1970	15,814	29,896
1972	19,465	36,491
1974	32,224	37,804
1975	37,342	41,605
1976	31,692	33,294
1977	31,685	36,971
1978	20,863	27,903
1980	27,250	34,540
1984	22,989	33,403
1986	26,203	37,607
1988	42,678	42,618
1990	44,227	44,177
1992	52,210	49,206
1994	52,269	59,620

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 15.--Veneer log and bolt production and receipts by species group in Wisconsin, 1992 and 1994

(In thousand board feet) 1/

Species group	Production			Receipts		
	1992	1994	Change	1992	1994	Change
SOFTWOODS						
N. white-cedar	8	8	0	8	8	0
Hemlock	341	--	-341	--	--	--
Jack pine	88	3	-85	--	--	--
Red pine	546	332	-214	78	78	0
White pine	982	563	-419	378	247	-131
Spruce	323	738	415	--	--	--
Tamarack	28	133	105	--	--	--
Total	2,316	1,776	-540	464	333	-131
HARDWOODS						
Ash	356	260	-96	556	454	-102
Aspen	16,259	15,805	-454	2,989	2,543	-446
Balsam poplar	7	--	-7	24	--	-24
Basswood	3,282	2,838	-444	5,432	4,047	-1,385
Beech	464	62	-402	--	109	109
White birch	5,198	7,576	2,378	5,707	9,930	4,223
Yellow birch	713	679	-34	1,606	1,505	-101
Cottonwood	364	156	-208	782	520	-262
Hickory	--	--	--	--	23	23
Hard maple	5,719	6,494	775	11,419	15,396	3,977
Soft maple	755	678	-77	1,390	1,690	300
Red oak group	13,160	12,154	-1,006	15,910	17,977	2,067
White oak group	3,304	3,083	-221	2,749	4,428	1,679
Black walnut	246	234	-12	3	--	-3
Black cherry	67	474	407	175	665	490
Total	49,894	50,493	599	48,742	59,288	10,546
All species	52,210	52,269	59	49,206	59,620	10,414

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 16.--Veneer log and bolt production in Wisconsin by species group and State or country of destination, 1994

(Thousand board feet) 1/

Species	Total	Illinois	Indiana	Michigan	Missouri	Wisconsin	Ohio	Canada
SOFTWOODS								
Tamarack	133	--	--	133	--	--	--	--
Spruce	738	--	--	738	--	--	--	--
Jack pine	3	--	--	--	--	--	3	--
Red pine	332	--	--	253	--	78	1	--
White pine	563	--	--	377	--	185	1	--
N. white-cedar	8	--	--	--	--	8	--	--
Total	1,776	--	--	1,500	--	271	5	--
HARDWOODS								
Soft maple	678	--	--	--	--	678	--	--
Hard maple	6,494	--	80	10	27	6,376	--	--
White birch	7,576	--	--	21	--	7,555	--	--
Yellow birch	679	--	--	21	--	658	--	--
Beech	62	--	--	--	--	62	--	--
Ash	260	--	23	--	--	237	--	--
Black walnut	234	171	63	--	--	--	--	--
Cottonwood	156	--	--	--	--	156	--	--
Aspen	15,805	--	--	13,500	--	2,305	--	--
Black cherry	474	--	21	--	--	453	--	--
Red oak group	12,154	--	68	10	--	12,016	--	59
White oak group	3,083	855	71	--	--	2,157	--	--
Basswood	2,838	--	--	--	--	2,838	--	--
Total	50,493	1,026	325	13,562	27	35,493	--	59
All species	52,269	1,026	325	15,062	27	35,764	5	59

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 17.--Veneer log and bolt receipts in Wisconsin by area of origin for selected years, 1946-1994

(In thousand board feet) 1/

Year	All areas	Area of origin				
		Wisconsin	Michigan	Minnesota	Other States	2/ Canada
1946	68,116	28,813	33,834	1,139	919	3,411
1948	71,791	31,553	27,052	4,811	1,066	7,309 3/
1950	62,935	26,198	19,917	4,919	924	10,977 3/
1952	59,500	28,899	15,775	5,826	1,516	7,484
1954	59,573	26,527	15,537	7,962	3,286	6,261
1956	66,949	30,298	18,932	7,221	3,405	7,093
1958	43,063	23,488	8,078	7,027	916	3,554
1960	51,298	24,249	8,659	8,380	5,207	4,803
1963	37,517	18,846	4,950	6,177	2,777	4,767
1965	41,918	23,788	5,918	6,148	1,726	4,338
1966	43,104	22,547	8,044	6,111	1,621	4,781
1968	42,162	20,458	8,265	5,207	2,642	5,590
1969	37,571	18,853	8,001	3,518	2,679	4,520
1970	29,896	15,148	7,347	2,951	1,747	2,703
1972	36,491	18,172	10,893	3,457	1,552	2,417
1974	37,804	19,643	10,922	4,083	1,950	1,206
1975	41,605	24,294	10,221	3,486	1,905	1,699
1976	33,294	20,379	9,009	2,136	1,567	203
1977	36,971	20,752	10,280	3,033	2,412	494
1978	27,903	14,299	9,029	2,468	1,587	520
1980	34,540	14,245	14,058	2,501	3,008	728
1984	33,403	20,575	9,385	2,079	1,225	139
1986	37,607	23,098	13,036	758	627	88
1988	42,618	26,030	12,550	2,929	1,092	17
1990	44,177	26,972	14,368	1,712	642	483
1992	49,207	33,916	12,049	2,204	787	251
1994	59,620	35,764	16,259	2,867	4,581	148

1/ International 1/4-inch rule.

2/ Includes only logs and bolts shipped to Canadian mills for processing.

3/ Includes nominal quantities from other countries.

Rows and columns may not sum due to rounding.

Table 18.--Veneer log and bolt receipts in Wisconsin by species group and area of origin, 1994

(Thousand board feet) 1/

Species	Total	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Wisconsin	Kentucky	Ohio	Other U.S.	Canada
SOFTWOODS												
Red pine	78	--	--	--	--	--	--	78	--	--	--	--
White pine	247	--	--	--	61	--	--	185	--	--	--	--
N. white-cedar	8	--	--	--	--	--	--	8	--	--	--	--
Total	333	--	--	--	61	--	--	271	--	--	--	--
HARDWOODS												
Soft maple	1,690	--	--	81	924	1	--	678	2	--	4	--
Hard maple	15,396	--	--	33	8,132	71	--	6,376	--	--	783	1
White birch	9,930	--	--	--	2,019	356	--	7,555	--	--	--	--
Yellow birch	1,505	--	--	--	841	--	--	658	--	--	--	5
Hickory	23	--	--	--	--	--	--	--	22	--	1	--
Beech	109	--	--	--	47	--	--	62	--	--	--	--
Ash	454	--	--	--	213	4	--	237	--	--	--	--
Cottonwood	520	--	--	42	--	322	--	156	--	--	--	--
Aspen	2,543	--	--	1	184	53	--	2,305	--	--	--	--
Black cherry	665	--	62	21	118	10	--	453	--	--	--	--
Red oak group	17,977	23	250	338	3,196	1,025	66	12,016	305	6	612	141
White oak group	4,428	12	541	718	5	491	225	2,157	19	84	177	--
Basswood	4,047	--	--	156	519	534	--	2,838	--	--	--	--
Total	59,288	35	853	1,389	16,198	2,867	290	35,493	347	90	1,577	148
All species	59,620	35	853	1,389	16,259	2,867	290	35,764	347	90	1,577	148

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding.

Table 19.--Wood material harvested for industrial roundwood by Forest Survey Unit, source of material, and species group, WIsconsin, 1994 1/

(Thousand cubic feet)

ALL UNITS

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	2,486.6	2,133.9	116.3	4,736.8	185.3	107.7	31.7	164.2	1,922.1	2,411.0	5,109.4	2,038.4	7,147.8
Redcedar	4.2	0.5	0.3	5.1	0.1	--	*	--	2.0	2.1	4.8	2.3	7.1
Tamarack	348.8	287.5	18.8	655.1	25.0	14.5	6.4	22.2	262.7	330.9	704.5	281.5	986.0
Spruce	1,489.9	1,059.7	89.4	2,639.1	93.4	52.3	27.2	80.0	1,050.0	1,303.0	2,802.7	1,139.4	3,942.1
Jack pine	11,776.0	18,597.5	771.8	31,145.3	1,692.1	1,053.8	352.6	4,255.7	11,110.5	18,464.6	37,727.6	11,882.3	49,610.0
Red pine	18,097.4	9,604.8	735.7	28,438.0	1,251.7	772.4	547.1	267.2	7,735.7	10,574.1	30,540.6	8,471.5	39,012.1
White pine	5,990.5	1,430.7	310.0	7,731.2	203.4	97.1	81.9	56.4	2,408.3	2,847.1	7,860.1	2,718.3	10,578.4
N. white-cedar	273.3	123.0	34.3	430.6	8.3	7.0	1.9	0.5	121.5	139.2	414.0	155.8	569.8
Hemlock	1,893.2	1,175.3	69.6	3,138.1	151.8	96.1	67.2	31.2	824.8	1,171.1	3,414.8	894.5	4,309.3
Total	42,360.0	34,413.0	2,146.3	78,919.3	3,611.1	2,200.8	1,116.0	4,877.5	25,437.8	37,243.2	88,578.4	27,584.1	116,162.4
HARDWOODS													
Soft maple	11,049.3	8,072.9	1,489.9	20,612.2	1,732.5	317.8	1,974.0	838.3	9,509.6	14,372.2	23,984.8	10,999.5	34,984.4
Hard maple	18,227.1	7,230.3	1,915.3	27,372.6	2,595.4	54.8	1,871.7	4,971.3	13,851.1	23,344.3	34,950.6	15,766.4	50,716.9
White birch	6,786.8	14,290.5	1,473.2	22,550.5	1,583.6	309.4	706.7	1,045.9	8,672.7	12,318.3	24,723.0	10,145.8	34,868.8
Yellow birch	1,191.3	458.0	173.0	1,822.3	154.2	2.4	114.8	385.1	926.3	1,582.8	2,305.8	1,099.3	3,405.1
Hickory	332.4	40.7	51.1	424.2	3.2	--	10.5	48.0	206.5	268.1	434.6	257.6	692.2
Hackberry	27.9	3.4	4.3	35.6	0.3	--	0.9	4.0	17.4	22.5	36.5	21.6	58.2
Beech	229.1	44.4	34.6	308.1	10.1	0.1	11.9	44.7	152.3	219.0	340.2	186.9	527.1
Ash	4,299.1	1,919.6	591.2	6,810.0	635.4	18.4	418.3	1,518.9	3,535.8	6,126.8	8,809.8	4,127.0	12,936.8
Butternut	37.4	4.6	5.8	47.8	0.4	--	1.2	5.4	23.3	30.2	49.0	29.0	78.0
Black walnut	129.5	11.6	21.0	162.2	1.0	--	6.7	13.7	69.5	91.0	162.5	90.6	253.1
Cottonwood	242.1	50.4	36.9	329.3	10.9	0.6	13.1	43.3	153.8	221.7	360.3	190.7	551.0
Balsam poplar	158.7	147.1	17.9	323.7	55.2	1.8	30.1	104.1	177.1	368.3	497.0	195.0	692.0
Aspen	73,965.6	35,502.2	7,229.2	116,697.0	3,738.1	82.4	5,941.8	1,718.8	42,946.3	54,427.5	120,949.0	50,175.5	171,124.4
Black cherry	745.8	109.0	115.6	970.4	18.6	0.1	34.8	117.1	460.5	631.1	1,025.4	576.2	1,601.5
Red oak group	31,894.2	5,749.6	4,455.5	42,099.2	1,827.2	61.9	1,867.4	471.6	16,769.7	20,997.7	41,871.8	21,225.1	63,096.9
White oak group	9,604.1	1,611.2	1,348.4	12,563.7	433.8	11.1	540.3	141.3	5,118.9	6,245.4	12,341.8	6,467.3	18,809.1
Willow	6.7	0.8	1.0	8.5	0.1	--	0.2	1.0	4.2	5.4	8.7	5.2	13.9
Basswood	7,157.0	2,157.2	1,102.1	10,416.3	548.6	30.5	462.3	1,605.1	4,802.6	7,449.1	11,960.7	5,904.7	17,865.4
Elm	1,332.0	689.6	177.0	2,198.6	253.5	2.7	160.6	583.0	1,214.7	2,214.6	3,021.5	1,391.8	4,413.2
Other hardwoods	344.5	356.8	37.3	738.6	131.2	5.6	71.3	236.9	400.5	845.5	1,146.3	437.8	1,584.1
Total	167,760.4	78,450.0	20,280.3	266,490.7	13,733.2	899.6	14,238.5	13,897.5	109,012.7	151,781.5	288,979.2	129,293.0	418,272.2
All species	210,120.4	112,863.0	22,426.6	345,410.0	17,344.3	3,100.4	15,354.4	18,775.0	134,450.5	189,024.7	377,557.6	156,877.1	534,434.7

(Table 19 continued on next page)

(Table 19 continued)

CENTRAL UNIT

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Loging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	10.2	8.2	0.5	18.9	0.7	0.4	0.1	0.6	7.7	9.6	20.3	8.2	28.5
Tamarack	15.8	14.1	0.7	30.5	1.2	0.7	0.2	1.1	12.4	15.6	33.1	13.1	46.2
Spruce	55.6	48.2	2.6	106.4	4.2	2.4	0.7	3.7	43.2	54.3	114.9	45.8	160.7
Jack pine	4,029.7	7,933.5	255.6	12,218.8	705.8	457.2	152.4	1,845.3	4,322.7	7,483.4	15,123.8	4,578.3	19,702.1
Red pine	4,607.7	3,685.5	151.4	8,444.6	465.4	307.2	212.5	90.1	2,066.0	3,141.1	9,368.3	2,217.3	11,585.6
White pine	1,881.5	491.2	94.5	2,467.2	68.5	33.8	25.7	18.5	759.4	905.9	2,519.1	853.9	3,373.0
N. white-cedar	9.1	1.2	0.7	11.0	0.2	--	*	--	4.3	4.5	10.4	5.0	15.4
Hemlock	54.7	42.4	1.8	98.9	5.4	3.5	2.4	1.1	24.5	36.9	109.5	26.2	135.8
Total	10,664.2	12,224.3	507.7	23,396.2	1,251.3	805.3	394.0	1,960.3	7,240.2	11,651.2	27,299.5	7,747.9	35,047.4
HARDWOODS													
Soft maple	2,442.4	1,113.4	354.0	3,909.8	224.7	37.4	284.6	252.6	1,845.9	2,645.3	4,355.2	2,199.9	6,555.1
Hard maple	2,667.9	876.5	277.5	3,821.9	315.7	3.5	246.3	617.9	1,933.2	3,116.7	4,727.9	2,210.8	6,938.6
White birch	506.9	906.5	107.0	1,520.5	98.2	18.6	45.2	79.3	602.2	843.5	1,654.7	709.2	2,363.9
Yellow birch	116.1	59.0	15.6	190.6	21.7	0.2	14.0	49.8	104.4	190.2	260.9	120.0	380.8
Hickory	49.6	6.1	7.6	63.4	0.5	--	1.6	7.2	30.8	40.0	64.9	38.5	103.4
Hackberry	0.1	*	*	0.2	*	--	*	*	0.1	0.1	0.2	0.1	0.3
Beech	14.6	5.8	2.0	22.4	2.0	*	1.4	5.1	12.0	20.4	28.8	14.0	42.8
Ash	802.5	273.7	114.1	1,190.3	89.0	0.9	65.2	245.1	626.2	1,026.4	1,476.4	740.3	2,216.7
Butternut	8.5	1.0	1.3	10.8	0.1	--	0.3	1.2	5.3	6.8	11.1	6.6	17.6
Black walnut	3.7	--	0.7	4.4	*	--	0.4	--	1.1	1.5	4.1	1.8	5.9
Cottonwood	21.7	3.8	3.3	28.8	0.8	*	1.1	3.9	14.0	19.8	31.3	17.3	48.6
Balsam poplar	2.3	1.6	0.3	4.2	0.6	*	0.4	1.3	2.4	4.8	6.3	2.7	9.0
Aspen	10,657.2	4,909.8	1,023.3	16,590.3	322.4	7.4	741.3	246.5	6,358.9	7,676.6	16,884.7	7,382.2	24,266.9
Black cherry	125.8	27.8	18.7	172.4	6.9	0.1	6.9	27.3	87.1	128.3	194.8	105.8	300.6
Red oak group	10,420.2	1,990.6	1,450.4	13,861.2	533.4	15.2	683.0	153.2	5,696.6	7,081.3	13,795.6	7,147.0	20,942.6
White oak group	2,821.3	615.3	390.7	3,827.2	161.8	5.2	222.7	40.5	1,579.7	2,009.8	3,866.7	1,970.4	5,837.0
Basswood	1,027.0	197.3	158.2	1,382.5	42.6	0.9	53.0	189.4	662.6	948.3	1,510.1	820.8	2,330.9
Elm	216.9	157.7	26.4	400.9	62.0	0.7	36.4	128.6	231.1	458.8	602.2	257.6	859.7
Other hardwoods	36.6	32.8	4.1	73.6	13.3	0.1	7.5	26.3	43.6	90.8	116.7	47.7	164.4
Total	31,941.4	11,178.6	3,955.4	47,075.4	1,895.6	90.2	2,411.2	2,075.2	19,837.2	26,309.5	49,592.3	23,792.6	73,384.9
All species	42,605.6	23,402.9	4,463.1	70,471.6	3,146.9	895.5	2,805.2	4,035.6	27,077.5	37,960.7	76,891.7	31,540.5	108,432.3

(Table 19 continued on next page)

(Table 19 continued)

NORTHEAST UNIT

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	1,257.2	1,067.8	59.6	2,384.7	92.7	53.8	15.9	81.9	966.4	1,210.6	2,569.3	1,026.0	3,595.3
Tamarack	145.7	109.7	9.3	264.7	9.6	5.5	3.6	8.5	104.3	131.4	282.5	113.6	396.1
Spruce	686.4	430.6	47.5	1,164.5	38.3	21.0	15.8	32.1	455.5	562.7	1,224.2	503.1	1,727.3
Jack pine	2,171.9	2,802.9	146.8	5,121.5	254.4	155.6	52.4	629.0	1,850.9	2,942.2	6,066.1	1,997.7	8,063.8
Red pine	5,199.5	2,217.9	225.2	7,642.7	296.8	173.9	127.1	67.4	2,184.3	2,849.4	8,082.6	2,409.5	10,492.1
White pine	1,876.8	432.8	98.4	2,408.0	63.2	30.1	29.0	17.5	756.3	896.2	2,449.4	854.8	3,304.2
N. white-cedar	121.2	102.9	22.7	246.8	5.7	6.9	1.8	0.5	49.9	64.8	239.0	72.6	311.6
Hemlock	1,625.8	999.0	60.1	2,684.9	129.2	81.6	57.1	26.6	707.5	1,002.0	2,919.3	767.6	3,686.9
Total	13,084.5	8,163.7	669.7	21,917.9	889.8	528.5	302.6	863.4	7,075.1	9,659.4	23,832.5	7,744.8	31,577.3
HARDWOODS													
Soft maple	3,909.5	3,311.4	510.6	7,731.5	725.2	133.4	818.0	242.0	3,567.9	5,486.5	9,139.5	4,078.5	13,218.0
Hard maple	8,222.6	3,488.9	874.3	12,585.8	1,241.2	34.2	877.1	2,331.9	6,291.8	10,776.3	16,196.0	7,166.1	23,362.1
White birch	3,283.5	6,254.4	688.1	10,226.0	703.3	140.7	330.4	476.4	3,877.6	5,528.5	11,188.8	4,565.7	15,754.5
Yellow birch	653.0	231.8	94.3	979.1	77.6	1.2	60.9	199.2	497.2	836.1	1,223.7	591.6	1,815.2
Hickory	22.2	2.7	3.4	28.3	0.2	--	0.7	3.2	13.8	17.9	29.0	17.2	46.3
Beech	165.2	29.8	25.1	220.2	6.4	0.1	8.3	30.5	107.6	152.9	240.3	132.8	373.1
Ash	1,347.1	788.9	176.9	2,312.8	258.5	13.1	153.0	539.9	1,161.1	2,125.5	3,100.4	1,337.9	4,438.3
Butternut	7.3	0.9	1.1	9.3	0.1	--	0.2	1.1	4.5	5.9	9.6	5.7	15.3
Black walnut	5.5	--	1.0	6.5	*	--	0.6	--	1.7	2.3	6.1	2.7	8.8
Cottonwood	12.8	16.4	1.3	30.5	5.3	0.5	2.5	8.2	13.6	30.1	45.7	14.9	60.5
Balsam poplar	106.6	94.2	12.2	213.0	36.5	0.8	20.4	70.9	120.6	249.1	329.3	132.8	462.1
Aspen	27,200.3	12,690.8	2,525.4	42,416.5	1,879.3	26.8	2,234.3	603.8	16,027.0	20,771.2	44,635.3	18,552.4	63,187.7
Black cherry	178.8	22.5	28.5	229.7	3.8	*	9.6	24.3	103.1	140.8	239.0	131.6	370.5
Red oak group	3,646.5	1,396.5	475.1	5,518.1	648.2	32.5	487.6	49.6	1,914.2	3,132.2	6,260.8	2,389.4	8,650.2
White oak group	837.0	252.1	111.9	1,201.0	64.5	2.4	93.6	12.0	509.9	682.4	1,261.6	621.8	1,883.4
Basswood	2,564.8	1,021.8	412.7	3,999.3	263.7	19.2	184.7	634.7	1,716.9	2,819.3	4,689.0	2,129.6	6,818.6
Elm	503.7	343.5	62.6	909.8	133.7	1.5	79.4	281.9	520.2	1,016.6	1,343.7	582.8	1,926.5
Other hardwoods	141.5	174.7	14.4	330.6	58.2	4.6	30.1	93.3	161.4	347.6	502.5	175.8	678.2
Total	52,807.9	30,121.3	6,018.9	88,948.1	6,105.6	411.0	5,391.5	5,602.8	36,610.1	54,121.1	100,440.2	42,629.1	143,069.3
All species	65,892.4	38,285.0	6,688.6	110,866.0	6,995.5	939.5	5,694.2	6,466.2	43,685.2	63,780.6	124,272.7	50,373.9	174,646.5

(Table 19 continued on next page)

(Table 19 continued)

NORTHWEST UNIT

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	1,213.7	1,056.0	55.9	2,325.5	91.6	53.4	15.7	81.6	945.0	1,187.3	2,512.0	1,000.9	3,512.8
Tamarack	185.1	163.3	8.6	357.0	14.1	8.3	2.6	12.7	145.0	182.6	386.1	153.5	539.6
Spruce	697.7	539.2	37.0	1,273.9	47.3	26.8	10.1	41.0	512.9	638.2	1,362.1	549.9	1,912.0
Jack pine	5,423.0	7,555.7	358.3	13,337.0	705.2	423.1	142.0	1,712.6	4,776.1	7,759.0	15,961.6	5,134.5	21,096.0
Red pine	6,516.2	2,314.7	295.9	9,126.9	315.9	176.2	128.8	76.0	2,695.7	3,392.6	9,527.9	2,991.6	12,519.4
White pine	1,552.3	207.6	81.6	1,841.6	34.5	11.4	11.4	12.0	616.7	686.0	1,829.2	698.3	2,527.5
N. white-cedar	4.3	0.8	0.4	5.5	0.1	--	0.0	--	1.8	1.9	5.2	2.2	7.4
Hemlock	196.6	131.0	7.0	334.6	16.8	10.8	7.5	3.4	86.3	124.9	366.2	93.3	459.5
Total	15,788.9	11,968.4	844.6	28,602.0	1,225.6	709.9	318.1	1,939.3	9,779.5	13,972.4	31,950.2	10,624.2	42,574.4
HARDWOODS													
Soft maple	3,581.2	3,427.9	453.4	7,462.6	752.2	143.2	815.1	195.0	3,376.5	5,282.0	8,914.7	3,829.9	12,744.6
Hard maple	5,050.5	2,650.5	533.1	8,234.1	1,001.3	16.7	644.2	1,948.3	4,406.3	8,016.8	11,311.5	4,939.4	16,250.9
White birch	2,846.0	6,975.7	648.4	10,470.0	765.7	147.1	320.1	471.2	4,062.1	5,766.2	11,525.8	4,710.4	16,236.2
Yellow birch	401.4	158.9	56.8	617.1	53.9	1.0	39.2	133.5	318.7	546.3	787.9	375.5	1,163.4
Hickory	4.6	0.6	0.7	5.9	*	--	0.1	0.7	2.9	3.7	6.0	3.6	9.6
Hackberry	10.8	1.3	1.7	13.8	0.1	--	0.3	1.6	6.7	8.7	14.2	8.4	22.6
Beech	6.9	3.5	0.9	11.3	1.3	*	0.8	2.9	6.2	11.3	15.4	7.2	22.6
Ash	1,389.0	749.4	184.0	2,322.4	273.9	4.4	172.7	613.3	1,265.6	2,329.8	3,202.6	1,449.6	4,652.2
Butternut	12.6	1.5	1.9	16.1	0.1	--	0.4	1.8	7.8	10.2	16.5	9.8	26.2
Black walnut	0.1	*	*	0.2	*	--	*	*	0.1	0.1	0.2	0.1	0.3
Cottonwood	8.6	8.3	1.0	17.8	3.0	0.1	1.6	5.5	9.4	19.6	27.1	10.3	37.4
Balsam poplar	10.4	18.8	0.8	30.0	5.0	0.8	1.9	5.6	9.3	22.7	42.6	10.2	52.8
Aspen	33,493.4	16,902.4	3,410.2	53,805.9	1,485.7	48.1	2,821.9	818.2	19,021.2	24,195.1	55,569.6	22,431.4	78,001.0
Black cherry	54.6	9.9	8.9	73.5	3.3	*	5.2	8.9	30.3	47.7	82.0	39.3	121.2
Red oak group	6,283.4	1,304.8	875.0	8,463.2	349.8	13.0	457.9	90.6	3,443.3	4,354.5	8,499.3	4,318.3	12,817.6
White oak group	976.4	302.1	130.0	1,408.5	80.5	3.0	113.1	13.9	596.6	807.0	1,488.9	726.7	2,215.5
Basswood	2,188.7	757.2	316.1	3,262.0	219.0	10.3	168.0	580.3	1,586.7	2,564.3	3,923.6	1,902.7	5,826.4
Elm	204.8	137.8	25.5	368.1	53.5	0.6	31.9	113.2	210.1	409.3	541.7	235.7	777.4
Other hardwoods	157.6	143.6	17.7	319.0	57.5	0.8	32.4	112.7	186.7	390.1	504.6	204.4	709.0
Total	56,681.1	33,554.2	6,666.2	96,901.6	5,105.9	389.2	5,626.6	5,117.1	38,546.6	54,785.4	106,474.2	45,212.8	151,687.0
All species	72,470.1	45,522.6	7,510.8	125,503.5	6,331.5	1,099.1	5,944.7	7,056.4	48,326.1	68,757.8	138,424.4	55,837.0	194,261.4

(Table 19 continued on next page)

(Table 19 continued)

SOUTHEAST UNIT

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	1.1	1.0	*	2.1	0.1	*	*	0.1	0.9	1.1	2.3	0.9	3.2
Tamarack	2.2	0.5	0.2	2.8	0.1	*	*	*	1.1	1.2	2.8	1.3	4.0
Spruce	21.1	17.1	1.0	39.2	1.5	0.9	0.3	1.3	15.9	19.8	42.1	16.9	59.1
Jack pine	43.7	87.1	2.7	133.6	7.8	5.0	1.7	20.3	47.3	82.0	165.6	50.0	215.6
Red pine	391.4	326.1	11.9	729.5	41.3	27.3	18.9	7.9	176.9	272.3	812.9	188.9	1,001.8
White pine	286.5	152.9	15.2	454.6	18.4	11.3	7.9	4.0	116.4	157.9	480.9	131.6	612.5
N. white-cedar	138.7	18.1	10.5	167.3	2.4	*	0.1	--	65.5	68.0	159.3	76.0	235.3
Hemlock	16.2	2.8	0.8	19.7	0.4	0.2	0.1	0.1	6.5	7.4	19.8	7.3	27.1
Total	900.8	605.6	42.4	1,548.9	71.9	44.7	29.0	33.7	430.4	609.8	1,685.8	472.9	2,158.7
HARDWOODS													
Soft maple	465.5	87.1	70.8	623.4	12.0	1.4	23.1	62.6	300.5	399.5	651.7	371.3	1,023.0
Hard maple	459.9	49.4	47.8	557.2	10.6	0.1	23.5	20.9	248.1	303.2	564.5	295.9	860.4
White birch	68.9	82.2	13.8	164.9	8.9	1.7	6.5	7.6	62.7	87.4	175.8	76.5	252.3
Yellow birch	4.0	1.7	0.6	6.3	0.6	*	0.4	1.5	3.4	5.9	8.3	4.0	12.3
Hickory	34.4	4.2	5.3	43.9	0.3	--	1.1	5.0	21.4	27.7	45.0	26.7	71.6
Hackberry	3.1	0.4	0.5	4.0	*	--	0.1	0.5	1.9	2.5	4.1	2.4	6.5
Beech	42.4	5.3	6.5	54.2	0.4	*	1.4	6.2	26.4	34.4	55.7	32.9	88.6
Ash	300.7	41.7	46.0	388.3	5.1	*	10.6	47.0	190.4	253.1	405.0	236.4	641.4
Butternut	2.3	0.3	0.4	3.0	*	--	0.1	0.3	1.5	1.9	3.1	1.8	4.9
Black walnut	13.8	1.3	2.2	17.3	0.1	--	0.7	1.6	7.6	9.9	17.4	9.8	27.2
Cottonwood	48.0	5.4	7.5	60.9	0.4	*	1.8	6.4	28.6	37.2	62.0	36.1	98.1
Balsam poplar	38.1	32.3	4.4	74.8	13.0	0.1	7.4	26.0	44.0	90.5	116.9	48.4	165.3
Aspen	767.9	376.4	71.1	1,215.5	20.6	--	62.2	19.8	477.4	580.0	1,246.9	548.5	1,795.5
Black cherry	52.0	7.1	8.0	67.1	0.9	*	1.8	8.1	32.8	43.6	69.9	40.8	110.7
Red oak group	1,472.9	158.3	210.4	1,841.6	43.4	0.5	41.6	22.5	740.9	848.9	1,739.2	951.3	2,690.5
White oak group	786.8	83.0	112.9	982.7	22.8	0.2	23.0	11.8	393.4	451.3	927.7	506.3	1,434.0
Basswood	233.4	39.5	36.4	309.2	9.1	0.1	13.9	39.7	144.2	207.0	335.7	180.5	516.2
Elm	55.6	7.0	8.5	71.2	0.6	*	1.8	8.2	34.7	45.4	73.3	43.3	116.6
Other hardwoods	1.9	1.1	0.2	3.2	0.4	*	0.3	0.9	1.8	3.4	4.6	2.0	6.6
Total	4,851.5	983.9	653.3	6,488.7	149.5	4.2	221.2	296.5	2,761.6	3,433.0	6,506.7	3,414.9	9,921.6
All species	5,752.3	1,589.5	695.7	8,037.5	221.4	48.9	250.2	330.2	3,192.1	4,042.8	8,192.5	3,887.8	12,080.3

(Table 19 continued on next page)

(Table 19 continued)

SOUTHWEST UNIT

Species group	Growing stock				Non-growing stock						Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products				Logging slash				
	Sawtimber	Pole-timber	(not used)	TOTAL	Limb-wood	Sap-lings	Cull trees	Dead trees	(not used)	TOTAL			
SOFTWOODS													
Balsam fir	4.3	0.9	0.3	5.6	0.1	*	*	*	2.2	2.4	5.4	2.5	8.0
Redcedar	4.2	0.5	0.3	5.1	0.1	--	*	--	2.0	2.1	4.8	2.3	7.1
Spruce	29.1	24.6	1.4	55.1	2.1	1.2	0.4	1.9	22.4	28.0	59.3	23.7	83.1
Jack pine	107.7	218.3	8.4	334.4	19.0	12.8	4.2	48.6	113.5	198.0	410.5	121.9	532.4
Red pine	1,382.6	1,060.5	51.3	2,494.3	132.3	87.8	59.9	25.7	612.9	918.7	2,748.9	664.2	3,413.0
White pine	393.6	146.2	20.2	560.0	18.8	10.5	7.8	4.5	159.5	201.2	581.4	179.7	761.1
Total	1,921.5	1,451.0	81.8	3,454.4	172.5	112.4	72.2	80.8	912.5	1,350.3	3,810.4	994.3	4,804.7
HARDWOODS													
Soft maple	650.7	133.1	101.1	884.9	18.5	2.3	33.2	86.1	418.8	558.9	923.9	519.9	1,443.8
Hard maple	1,826.2	164.9	182.5	2,173.6	26.6	0.2	80.6	52.3	971.6	1,131.3	2,150.8	1,154.1	3,305.0
White birch	81.5	71.9	15.8	169.2	7.4	1.3	4.6	11.4	68.1	92.7	178.0	83.9	261.9
Yellow birch	16.6	6.6	5.8	29.1	0.5	*	0.3	1.1	2.5	4.3	25.1	8.3	33.4
Hickory	221.5	27.1	34.1	282.7	2.1	--	7.0	32.0	137.6	178.7	289.7	171.7	461.4
Hackberry	13.8	1.7	2.1	17.6	0.1	--	0.4	2.0	8.6	11.2	18.1	10.7	28.8
Ash	459.8	66.1	70.3	596.2	8.9	0.1	16.8	73.6	292.6	392.0	625.3	362.9	988.2
Butternut	6.7	0.8	1.0	8.6	0.1	--	0.2	1.0	4.2	5.4	8.8	5.2	14.0
Black walnut	106.4	10.3	17.1	133.8	0.8	--	5.1	12.2	59.1	77.1	134.7	76.1	210.9
Cottonwood	151.0	16.4	23.8	191.2	1.3	*	6.1	19.3	88.3	115.1	194.2	112.1	306.3
Balsam poplar	1.3	0.2	0.2	1.7	*	*	0.1	0.2	0.8	1.1	1.8	1.0	2.8
Aspen	1,846.8	622.8	199.1	2,668.8	30.2	--	82.0	30.7	1,061.8	1,204.6	2,612.5	1,260.9	3,873.4
Black cherry	334.5	41.6	51.6	427.8	3.8	*	11.2	48.5	207.2	270.7	439.7	258.8	698.5
Red oak group	10,071.3	899.4	1,444.5	12,415.2	252.4	0.8	197.3	155.7	4,974.7	5,580.8	11,576.8	6,419.2	17,996.0
White oak group	4,182.7	358.7	602.8	5,144.2	104.2	0.2	88.0	63.1	2,039.4	2,294.9	4,796.9	2,642.2	7,439.1
Willow	6.7	0.8	1.0	8.5	0.1	--	0.2	1.0	4.2	5.4	8.7	5.2	13.9
Basswood	1,143.1	141.4	178.7	1,463.2	14.1	*	42.7	160.9	692.3	910.1	1,502.3	871.1	2,373.3
Elm	351.0	43.6	54.0	448.5	3.6	*	11.2	51.1	218.5	284.5	460.6	272.5	733.0
Other hardwoods	6.8	4.6	0.9	12.2	1.8	*	1.1	3.8	7.0	13.6	18.0	7.8	25.8
Total	21,478.5	2,612.0	2,986.5	27,076.9	476.5	5.0	588.0	805.8	11,257.2	13,132.5	25,965.8	14,243.6	40,209.4
All species	23,400.0	4,063.0	3,068.3	30,531.3	649.0	117.4	660.2	886.6	12,169.6	14,482.8	29,776.2	15,237.9	45,014.2

** = Less than 50 cubic feet.*

1/ Based on factors obtained from the Wisconsin Utilization Study of 1983 and other regional utilization studies.

Rows and columns may not sum due to rounding.

Table 20.—Growing-stock removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

(Thousand cubic feet)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
CENTRAL UNIT																
Adams	--	--	--	5	2,527	1,305	199	--	--	4,036	79	39	68	1	1	--
Chippewa	5	--	11	2	16	199	104	--	6	344	441	434	240	12	1	*
Clark	1	--	--	1	282	201	178	--	1	663	778	723	418	37	1	--
Eau Claire	*	--	--	16	987	330	60	--	--	1,393	304	231	189	8	2	--
Jackson	--	--	1	6	3,770	563	303	--	1	4,643	284	167	152	5	14	--
Juneau	*	--	--	--	1,900	661	215	--	--	2,777	125	103	45	2	8	--
Marathon	10	--	5	52	115	433	147	*	72	835	1,007	1,245	169	88	5	--
Marquette	--	--	--	2	69	676	96	--	--	843	14	25	7	1	1	--
Monroe	--	--	--	1	798	500	331	--	--	1,631	84	164	29	2	17	--
Portage	1	--	13	4	573	799	304	--	12	1,705	237	149	59	16	3	--
Waupaca	1	--	--	8	80	770	168	11	4	1,042	242	347	49	10	10	--
Waushara	--	--	1	6	115	1,720	194	--	--	2,036	59	40	16	1	1	--
Wood	*	--	--	3	986	287	169	--	3	1,449	257	154	81	9	*	--
Total	19	--	31	106	12,219	8,445	2,467	11	99	23,396	3,910	3,822	1,520	191	63	*
NORTHEAST UNIT																
Florence	149	--	12	117	184	244	51	6	302	1,067	452	807	559	103	--	--
Forest	437	--	9	344	125	1,120	139	6	447	2,628	1,390	2,603	1,119	231	*	--
Langlade	319	--	13	107	127	511	50	2	111	1,240	1,305	2,202	1,318	107	3	--
Lincoln	216	--	45	68	179	357	241	--	40	1,148	680	864	816	43	*	--
Marinette	383	--	32	79	1,626	1,899	161	131	70	4,381	802	952	1,033	104	3	--
Menominee	112	--	10	32	117	238	647	12	1,483	2,651	735	1,179	158	159	7	--
Oconto	64	--	2	31	518	1,024	154	20	12	1,825	617	721	924	82	2	--
Oneida	406	--	98	215	642	1,254	410	2	137	3,163	802	1,152	2,027	47	--	--
Shawano	3	--	15	3	24	175	120	66	39	444	274	948	79	29	14	--
Vilas	295	--	29	168	1,581	821	435	2	42	3,373	674	1,156	2,192	75	--	--
Total	2,385	--	265	1,165	5,122	7,643	2,408	247	2,685	21,918	7,731	12,586	10,226	979	28	--
NORTHWEST UNIT																
Ashland	244	--	57	356	149	424	249	2	21	1,503	647	910	647	95	*	--
Barron	1	--	63	9	87	93	55	--	1	308	341	330	213	3	1	1
Bayfield	103	--	4	102	3,827	2,587	607	*	3	7,234	690	610	1,914	56	*	--
Burnett	13	--	1	7	2,785	1,056	113	--	1	3,976	162	130	210	3	--	--
Douglas	754	--	10	176	4,122	1,641	77	*	--	6,781	308	103	1,199	6	--	--
Iron	307	--	7	231	118	118	47	--	63	890	947	1,422	938	117	--	--
Polk	1	--	--	6	364	127	16	--	--	514	101	172	160	1	*	--
Price	484	--	92	171	72	614	59	2	87	1,582	801	994	1,268	74	--	--
Rusk	30	--	47	55	58	127	49	--	30	396	1,000	1,280	941	56	1	11
Sawyer	176	--	50	81	293	1,140	502	--	41	2,282	1,133	1,341	1,865	136	1	--
Taylor	162	--	26	63	7	47	28	--	87	421	663	608	498	41	1	--
Washburn	51	--	*	17	1,455	1,151	39	*	1	2,715	668	334	617	31	--	3
Total	2,325	--	357	1,274	13,337	9,127	1,842	6	335	28,602	7,463	8,234	10,470	617	6	14

(Table 20 continued on next page)

(Table 20 continued)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
SOUTHEAST UNIT																
Brown	--	--	--	--	1	64	24	70	2	161	63	69	9	1	3	--
Calumet	--	--	--	1	--	1	3	5	--	10	10	25	1	*	2	--
Columbia	*	--	--	2	5	196	40	--	--	244	11	20	12	--	8	--
Dane	--	--	--	1	--	42	21	*	--	64	8	12	3	--	11	*
Dodge	--	--	--	5	--	11	32	7	--	54	48	25	*	--	6	*
Door	--	--	--	--	*	12	10	22	*	45	29	19	95	2	1	--
Fond Du Lac	--	--	--	*	1	--	--	--	--	1	16	16	--	--	*	*
Green	--	--	--	1	4	47	55	--	--	106	1	23	*	--	--	--
Green Lake	1	--	--	--	3	35	9	*	1	48	35	17	3	*	4	--
Jefferson	--	--	--	--	103	33	4	--	1	141	15	23	*	--	5	--
Kenosha	--	--	--	--	1	5	--	--	--	5	--	--	--	--	--	--
Kewaunee	--	--	2	--	--	3	9	22	6	42	73	29	11	2	--	--
Manitowoc	--	--	--	1	2	20	62	29	8	121	77	83	6	--	2	*
Milwaukee	--	--	--	--	1	1	--	--	--	2	--	--	--	--	--	--
Outagamie	--	--	*	1	--	36	15	11	2	65	148	68	19	1	1	--
Ozaukee	--	--	--	5	--	6	2	*	--	13	19	10	--	--	--	1
Rock	--	--	--	*	1	34	4	*	--	39	4	3	*	--	--	*
Sheboygan	--	--	--	*	--	4	13	1	--	18	23	70	*	*	*	*
Walworth	--	--	--	--	3	63	53	--	--	118	--	--	--	--	--	--
Washington	1	--	--	22	1	41	32	*	--	96	21	15	2	--	--	2
Waukesha	--	--	--	--	1	74	63	*	--	139	6	6	--	--	--	*
Winnebago	--	--	--	--	8	3	5	--	--	16	16	23	3	*	1	*
Total	2	--	3	39	134	729	455	167	20	1,549	623	557	165	6	44	4
SOUTHWEST UNIT																
Buffalo	--	--	--	--	1	76	51	--	--	128	115	72	21	*	32	3
Crawford	--	--	--	--	1	15	1	--	--	17	57	198	*	--	40	2
Dunn	--	--	--	8	65	457	38	--	--	568	231	305	82	3	5	--
Grant	--	--	--	--	1	346	20	--	--	367	78	186	1	*	31	9
Iowa	--	--	--	1	1	71	81	--	--	153	19	58	*	--	21	*
La Crosse	--	--	--	1	48	301	48	--	--	398	29	34	10	--	15	2
Lafayette	--	--	--	1	--	*	1	--	--	2	*	1	1	--	*	--
Pepin	--	--	--	5	5	57	40	--	--	107	18	42	4	*	2	--
Pierce	5	--	--	7	7	30	11	--	--	62	11	214	3	--	3	--
Richland	--	--	--	6	9	83	38	--	--	137	60	477	*	--	47	--
Sauk	--	2	--	1	101	363	114	--	--	582	137	164	9	*	36	*
St. Croix	--	3	--	12	69	277	11	--	--	371	12	42	3	--	3	--
Trempealeau	*	--	--	12	23	374	58	--	--	468	74	26	36	25	12	*
Vernon	--	--	--	--	3	43	48	--	--	95	45	353	1	*	36	1
Total	6	5	--	55	334	2,494	560	--	--	3,454	885	2,174	169	29	283	18
State total	4,737	5	655	2,639	31,145	28,438	7,731	431	3,138	78,919	20,612	27,373	22,551	1,822	424	36

(Table 20 continued on next page)

(Table 20 continued)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
CENTRAL UNIT																
Adams	--	22	4	--	4	*	332	22	1,331	242	--	11	5	2	2,161	6,196
Chippewa	*	161	1	--	1	1	2,374	2	892	297	--	224	15	17	5,112	5,456
Clark	2	167	*	--	*	*	3,544	5	1,304	645	--	150	77	18	7,872	8,535
Eau Claire	--	50	*	--	1	*	1,361	4	794	299	--	57	7	9	3,317	4,709
Jackson	*	37	*	--	2	*	1,662	27	1,641	489	--	44	12	6	4,541	9,184
Juneau	--	48	*	--	--	1	332	14	1,311	374	--	52	10	2	2,426	5,202
Marathon	9	360	3	2	1	1	3,178	13	1,038	131	--	497	209	9	7,963	8,798
Marquette	--	4	--	--	--	--	225	*	387	131	--	4	*	1	800	1,643
Monroe	--	148	--	--	2	--	423	76	2,431	647	--	116	9	1	4,150	5,781
Portage	1	66	*	--	*	*	1,038	4	776	151	--	78	25	3	2,607	4,312
Waupaca	10	69	1	2	11	*	694	3	615	104	--	93	24	1	2,284	3,327
Waushara	--	12	--	--	4	--	129	*	798	158	--	17	1	2	1,238	3,274
Wood	*	47	*	--	4	*	1,299	1	544	159	--	40	7	4	2,605	4,055
Total	22	1,190	11	4	29	4	16,590	172	13,861	3,827	--	1,383	401	74	47,075	70,472
NORTHEAST UNIT																
Florence	1	62	*	--	1	40	3,022	3	100	15	--	165	24	11	5,364	6,431
Forest	10	638	3	--	1	47	5,085	56	311	138	--	776	290	43	12,741	15,369
Langlade	6	297	2	2	3	11	4,833	46	547	140	--	723	122	34	11,701	12,941
Lincoln	4	276	*	--	5	5	4,223	12	548	60	--	393	115	55	8,101	9,248
Marinette	8	193	*	--	1	47	6,702	14	690	437	--	349	51	13	11,399	15,780
Menominee	152	118	--	--	*	7	3,332	68	958	42	--	388	134	9	7,447	10,098
Oconto	5	85	*	--	*	23	3,047	2	452	145	--	128	82	8	6,324	8,148
Oneida	*	369	--	--	15	15	4,713	6	881	91	--	594	30	115	10,859	14,022
Shawano	35	116	3	4	*	*	1,791	17	586	53	--	219	42	1	4,209	4,653
Vilas	*	159	1	--	4	18	5,669	6	445	80	--	263	21	40	10,804	14,177
Total	220	2,313	9	7	30	213	42,417	230	5,518	1,201	--	3,999	910	331	88,948	110,866
NORTHWEST UNIT																
Ashland	*	167	--	--	*	*	2,951	9	533	86	--	287	23	32	6,389	7,892
Barron	--	61	3	*	*	*	2,462	3	852	210	--	112	7	10	4,610	4,918
Bayfield	*	171	1	--	1	1	6,755	4	1,037	125	--	297	19	20	11,701	18,935
Burnett	--	62	*	--	*	*	2,536	*	444	137	--	43	6	9	3,743	7,719
Douglas	*	107	--	--	--	--	5,201	--	258	36	--	36	4	4	7,261	14,042
Iron	*	263	1	--	6	19	6,079	22	670	73	--	327	23	63	10,972	11,862
Polk	--	44	1	--	1	--	1,667	1	583	103	--	66	4	3	2,907	3,421
Price	2	316	--	--	4	4	5,857	15	450	72	--	442	74	53	10,424	12,006
Rusk	1	357	7	--	2	2	5,731	8	1,214	219	--	611	61	46	11,548	11,944
Sawyer	*	387	1	--	1	1	5,860	10	1,097	143	--	512	44	37	12,569	14,852
Taylor	3	262	*	--	2	2	3,730	1	565	111	--	419	91	27	7,026	7,446
Washburn	5	124	1	--	*	*	4,978	1	761	93	--	111	12	15	7,753	10,468
Total	11	2,322	16	*	18	30	53,806	73	8,463	1,408	--	3,262	368	319	96,902	125,504

(Table 20 continued on next page)

(Table 20 contined)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
SOUTHEAST UNIT																
Brown	7	32	1	--	17	72	914	1	85	50	--	63	3	*	1,391	1,552
Calumet	*	12	--	--	1	--	4	*	16	9	--	7	1	--	89	100
Columbia	--	5	--	1	*	--	37	7	468	251	--	24	5	*	848	1,092
Dane	--	51	--	4	1	--	5	20	243	188	--	23	11	1	581	646
Dodge	--	44	--	*	--	--	2	7	72	77	--	30	12	*	323	377
Door	5	12	1	--	3	*	81	1	30	6	--	4	1	1	291	336
Fond Du Lac	--	10	--	*	--	--	1	2	30	18	--	3	*	--	98	99
Green	--	4	--	8	--	--	1	4	90	68	--	20	11	*	232	338
Green Lake	--	2	--	--	*	--	13	1	155	47	--	20	*	1	299	347
Jefferson	--	33	--	--	--	--	11	9	57	39	--	23	10	--	226	367
Kenosha	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Kewaunee	8	23	--	--	5	3	14	--	46	20	--	5	3	*	242	284
Manitowoc	19	53	--	--	24	--	28	1	98	40	--	25	6	--	461	581
Milwaukee	--	*	--	*	--	--	--	--	1	--	--	--	--	--	1	3
Outagamie	8	34	--	--	6	--	100	4	104	17	--	10	2	*	522	586
Ozaukee	1	4	--	--	--	--	--	--	16	2	--	3	--	--	56	68
Rock	--	5	1	3	*	--	--	7	40	38	--	1	5	--	108	147
Sheboygan	7	48	--	--	2	*	1	2	162	57	--	26	*	--	399	417
Walworth	--	4	--	--	*	--	--	1	6	12	--	1	--	--	24	143
Washington	*	5	*	--	*	--	*	*	26	15	--	3	1	--	90	186
Waukesha	--	4	--	1	--	--	1	--	26	13	--	5	*	--	61	200
Winnebago	--	3	--	--	--	--	1	--	72	14	--	13	--	--	146	162
Total	54	388	3	17	61	75	1,215	67	1,842	983	--	309	71	3	6,489	8,038
SOUTHWEST UNIT																
Buffalo	--	10	--	*	53	--	690	66	2,176	626	--	91	33	*	3,989	4,116
Crawford	--	66	--	20	--	--	53	37	1,154	411	--	145	60	*	2,243	2,260
Dunn	--	103	5	--	9	1	587	18	770	273	--	188	31	8	2,618	3,186
Grant	--	57	*	55	52	--	51	17	1,155	646	9	147	56	*	2,549	2,916
Iowa	--	18	*	21	--	--	24	23	604	334	--	44	45	*	1,211	1,364
La Crosse	--	33	--	5	11	--	30	39	980	284	--	65	22	*	1,559	1,956
Lafayette	--	4	--	4	--	--	*	2	25	37	--	6	*	--	81	83
Pepin	--	7	--	--	4	--	84	3	234	89	--	37	3	*	527	634
Pierce	--	50	*	--	13	--	88	4	347	254	--	127	29	--	1,143	1,205
Richland	--	87	--	13	--	1	74	40	1,303	596	--	160	68	*	2,926	3,063
Sauk	--	48	3	4	--	1	201	90	1,285	544	--	114	45	2	2,682	3,264
St. Croix	--	4	*	--	2	--	350	1	204	52	--	49	3	--	727	1,098
Trempealeau	--	2	*	*	39	--	336	47	984	347	--	43	9	1	1,979	2,447
Vernon	--	107	--	13	8	--	100	41	1,194	653	--	246	45	1	2,843	2,938
Total	--	596	9	134	191	2	2,669	428	12,415	5,144	9	1,463	449	12	27,077	30,531
State total	308	6,810	48	162	329	324	116,697	970	42,099	12,564	9	10,416	2,199	739	266,491	345,410

** = less than 500 cubic feet.*

Rows and columns may not sum due to rounding.

Table 21.—Sawtimber removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Wisconsin, 1994

(Thousand board feet)1/

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
CENTRAL UNIT																
Adams	--	--	--	8	3,152	2,882	635	--	--	6,677	289	157	240	1	3	--
Chippewa	8	--	17	4	20	828	519	--	12	1,407	1,599	1,689	443	38	4	1
Clark	2	--	--	1	345	638	724	--	1	1,712	2,361	1,735	532	72	7	--
Eau Claire	*	--	--	25	1,209	674	152	--	--	2,060	970	583	158	14	11	--
Jackson	--	--	1	10	4,682	1,444	1,257	--	1	7,395	851	399	239	9	66	--
Juneau	1	--	--	--	2,330	1,739	1,020	--	--	5,090	464	399	67	6	37	--
Marathon	20	--	9	84	258	1,051	730	1	174	2,327	3,948	5,655	467	291	22	--
Marquette	--	--	--	3	85	1,288	409	--	--	1,785	36	100	5	1	5	--
Monroe	--	--	--	1	978	1,003	1,689	--	--	3,671	332	765	67	11	84	--
Portage	1	--	21	6	704	2,059	1,264	--	22	4,078	926	579	153	56	14	--
Waupaca	2	--	--	16	98	1,718	812	44	22	2,713	1,047	1,741	215	30	47	--
Waushara	--	--	1	10	141	3,752	648	--	--	4,551	223	149	18	2	5	--
Wood	1	--	--	5	1,271	765	690	--	6	2,738	927	365	85	15	1	--
Total	34	--	48	173	15,275	19,843	10,547	45	238	46,203	13,972	14,314	2,691	546	305	1
NORTHEAST UNIT																
Florence	239	--	32	256	326	939	229	20	849	2,891	987	2,286	1,199	406	--	--
Forest	750	--	32	852	318	5,176	674	23	1,855	9,678	3,039	8,915	1,764	841	2	--
Langlade	525	--	28	172	207	1,612	206	9	261	3,020	3,370	7,890	2,149	302	12	--
Lincoln	357	--	75	138	247	1,336	1,165	--	77	3,395	1,790	2,400	1,087	102	1	--
Marinette	612	--	51	229	2,430	5,315	620	197	296	9,750	2,506	3,065	2,599	396	12	--
Menominee	177	--	15	84	144	733	2,882	24	3,761	7,820	2,194	4,744	191	594	34	--
Oconto	108	--	9	166	759	3,163	615	51	25	4,896	2,079	2,437	2,059	311	11	--
Oneida	704	--	179	388	1,013	4,785	1,781	8	365	9,223	1,787	2,402	2,999	160	--	--
Shawano	5	--	24	5	29	432	606	261	132	1,493	1,085	4,879	308	112	65	--
Vilas	508	--	77	383	3,687	3,492	1,868	7	80	10,102	1,563	3,217	2,926	244	--	--
Total	3,984	--	522	2,673	9,158	26,982	10,645	601	7,702	62,267	20,398	42,234	17,280	3,467	136	--
NORTHWEST UNIT																
Ashland	417	--	91	711	339	1,802	1,194	10	41	4,604	1,593	2,829	987	403	1	--
Barron	2	--	100	14	107	197	290	--	2	712	1,123	1,408	417	10	7	3
Bayfield	182	--	6	244	6,782	12,398	3,196	1	9	22,818	1,497	1,435	2,480	179	1	--
Burnett	21	--	1	11	4,834	3,486	589	--	2	8,943	398	337	489	4	--	--
Douglas	1,192	--	15	279	6,435	5,498	382	1	--	13,802	495	171	1,197	11	--	--
Iron	495	--	16	414	178	421	177	--	121	1,823	2,275	3,766	1,393	411	--	--
Polk	1	--	--	10	463	514	82	--	--	1,071	281	811	425	3	2	--
Price	793	--	146	293	102	2,364	181	8	269	4,156	1,820	2,585	1,360	214	--	--
Rusk	47	--	74	88	72	340	177	--	87	885	2,633	3,907	1,316	159	7	51
Sawyer	285	--	79	153	506	4,181	2,600	--	180	7,984	2,614	3,853	2,446	448	5	--
Taylor	259	--	42	120	8	155	137	--	195	916	2,067	1,820	778	122	7	--
Washburn	80	--	1	31	2,618	3,534	143	2	2	6,412	1,478	759	711	112	--	13
Total	3,775	--	572	2,367	22,444	34,889	9,149	22	907	74,125	18,275	23,681	13,999	2,077	28	66

(Table 21 continued on next page)

(Table 21 continud)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
SOUTHEAST UNIT																
Brown	--	--	--	--	1	269	130	287	9	697	231	339	23	2	14	--
Calumet	--	--	--	3	--	3	18	20	--	44	45	137	5	*	12	--
Columbia	1	--	--	4	6	374	135	--	--	519	53	106	63	--	38	--
Dane	--	--	--	2	--	82	58	1	--	144	34	57	1	--	53	2
Dodge	--	--	--	8	--	22	73	27	--	131	231	136	*	--	29	*
Door	--	--	--	--	2	52	57	87	2	200	126	80	128	9	5	--
Fond Du Lac	--	--	--	1	1	--	--	--	--	2	77	89	--	--	2	1
Green	--	--	--	2	4	94	111	--	--	211	5	125	*	--	--	--
Green Lake	1	--	--	--	3	75	38	1	2	119	165	86	10	*	17	--
Jefferson	--	--	--	--	127	63	8	--	1	198	73	123	*	--	23	--
Kenosha	--	--	--	--	1	9	--	--	--	10	--	--	--	--	--	--
Kewaunee	--	--	10	--	--	6	47	90	29	181	307	99	21	6	--	--
Manitowoc	--	--	--	3	2	80	271	118	40	514	372	451	29	--	10	1
Milwaukee	--	--	--	--	1	2	--	--	--	3	--	--	--	--	--	--
Outagamie	--	--	1	2	--	71	69	46	10	198	696	344	91	1	5	--
Ozaukee	--	--	--	7	--	11	4	1	--	23	92	56	--	--	--	3
Rock	--	--	--	1	1	65	8	1	--	77	12	14	2	--	--	2
Sheboygan	--	--	--	1	--	8	70	5	--	83	110	377	1	1	1	2
Walworth	--	--	--	--	3	120	128	--	--	252	--	--	--	--	--	--
Washington	1	--	--	34	1	99	75	*	--	211	101	82	9	--	--	8
Waukesha	--	--	--	--	2	141	120	2	--	265	28	35	--	--	--	1
Winnebago	--	--	--	--	10	5	24	--	--	39	63	109	10	1	5	*
Total	3	--	11	69	165	1,649	1,445	687	94	4,122	2,819	2,845	395	20	211	19
SOUTHWEST UNIT																
Buffalo	--	--	--	--	2	144	206	--	--	352	546	377	91	*	152	15
Crawford	--	--	--	--	1	30	8	--	--	39	274	1,073	*	--	192	7
Dunn	--	--	--	13	80	1,334	175	--	--	1,603	907	1,364	116	9	24	--
Grant	--	--	--	--	1	1,003	102	--	--	1,106	363	1,002	*	*	149	45
Iowa	--	--	--	1	1	177	361	--	--	541	90	315	1	--	100	*
La Crosse	--	--	--	2	58	574	91	--	--	725	100	184	44	--	71	9
Lafayette	--	--	--	2	--	3	5	--	--	9	1	6	6	--	2	--
Pepin	--	--	--	8	6	117	185	--	--	316	82	225	15	*	9	--
Pierce	20	--	--	17	11	60	24	--	--	131	51	1,154	13	--	15	--
Richland	--	--	--	10	12	174	117	--	--	313	286	2,586	*	--	228	--
Sauk	--	9	--	2	124	997	368	--	--	1,500	646	869	30	*	174	2
St. Croix	--	12	--	18	84	655	41	--	--	811	59	228	13	--	16	--
Trempealeau	*	--	--	20	28	717	190	--	--	955	335	111	150	121	57	2
Vernon	--	--	--	--	4	127	242	--	--	373	213	1,911	1	8	172	5
Total	20	21	--	92	412	6,112	2,116	--	--	8,773	3,953	11,405	482	131	1,359	85
State total	7,816	21	1,152	5,375	47,454	89,476	33,903	1,354	8,940	195,490	59,417	94,481	34,846	6,240	2,039	171

(Table 21 continued on next page)

(Table 21 continued)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
CENTRAL UNIT																
Adams	--	76	18	--	18	*	1,122	71	4,290	717	--	42	22	3	7,069	13,746
Chippewa	*	601	5	--	1	1	7,096	7	4,222	1,447	--	910	49	28	18,143	19,550
Clark	3	469	2	--	1	1	9,707	20	5,460	2,632	--	627	158	29	23,815	25,526
Eau Claire	--	110	2	--	2	*	3,683	15	3,089	1,022	--	225	15	14	9,913	11,974
Jackson	*	80	2	--	9	*	4,561	79	7,366	2,063	--	191	42	9	15,967	23,362
Juneau	--	183	*	--	--	4	1,092	68	4,976	1,421	--	242	47	3	9,008	14,098
Marathon	22	1,379	13	12	2	2	9,034	59	4,979	619	--	2,289	356	14	29,164	31,491
Marquette	--	10	--	--	--	--	1,027	2	1,860	635	--	16	*	1	3,697	5,482
Monroe	--	680	--	--	8	--	1,710	366	11,820	3,133	--	556	43	1	19,576	23,247
Portage	1	252	2	--	1	1	3,370	20	3,698	646	--	322	48	6	10,094	14,172
Waupaca	48	292	6	12	51	*	2,136	16	3,093	505	--	431	44	1	9,714	12,427
Waushara	--	28	--	--	19	--	352	1	3,598	725	--	75	2	3	5,201	9,753
Wood	*	113	1	--	17	*	3,263	3	2,531	677	--	171	14	6	8,189	10,927
Total	75	4,273	52	25	129	9	48,152	726	60,982	16,243	--	6,096	842	119	169,552	215,755
NORTHEAST UNIT																
Florence	1	127	1	--	1	65	8,060	13	366	48	--	565	45	18	14,188	17,079
Forest	22	2,335	13	--	2	76	16,255	274	955	344	--	3,374	546	70	38,826	48,504
Langlade	18	730	12	12	5	18	13,511	210	2,198	411	--	3,064	250	55	34,216	37,236
Lincoln	8	691	*	--	8	8	10,930	66	1,682	145	--	1,232	194	87	20,429	23,824
Marinette	36	682	1	--	2	109	22,788	62	3,186	2,075	--	1,423	235	22	39,198	48,948
Menominee	707	206	--	--	*	12	7,609	328	3,157	118	--	1,816	266	15	21,990	29,810
Oconto	24	251	*	--	1	37	9,537	7	2,195	696	--	468	285	14	20,409	25,305
Oneida	1	664	--	--	19	19	13,055	28	2,253	265	--	1,000	71	143	24,865	34,088
Shawano	163	490	15	25	*	*	5,340	81	2,978	235	--	1,064	91	2	16,933	18,425
Vilas	*	285	3	--	5	29	16,426	31	1,467	231	--	582	60	56	27,124	37,226
Total	979	6,461	45	37	44	373	123,510	1,099	20,438	4,567	--	14,588	2,041	480	258,178	320,445
NORTHWEST UNIT																
Ashland	*	445	--	--	1	1	7,486	49	2,148	222	--	1,220	56	48	17,490	22,094
Barron	--	188	16	1	1	*	9,755	10	4,128	1,034	--	453	30	17	18,601	19,313
Bayfield	*	368	6	--	1	1	16,155	24	4,482	345	--	1,209	59	33	28,273	51,091
Burnett	--	115	2	--	1	*	7,582	1	1,967	613	--	157	23	14	11,704	20,647
Douglas	*	177	--	--	--	--	12,020	--	1,134	80	--	119	6	6	15,419	29,221
Iron	*	590	6	--	8	19	14,169	115	2,281	182	--	670	51	103	26,039	27,861
Polk	--	158	3	--	3	--	4,831	3	2,892	502	--	272	17	5	10,208	11,278
Price	3	798	--	--	7	7	15,342	51	1,321	228	--	1,540	146	86	25,507	29,663
Rusk	2	1,146	31	--	4	4	17,737	33	5,341	846	--	2,292	138	75	35,720	36,605
Sawyer	1	1,267	6	--	1	1	18,174	34	4,963	423	--	2,103	106	60	36,503	44,487
Taylor	4	904	1	--	4	4	9,748	2	2,372	463	--	1,673	166	44	20,178	21,094
Washburn	22	285	6	--	*	*	15,825	4	3,543	368	--	322	40	24	23,512	29,924
Total	33	6,438	77	1	30	38	148,825	326	36,572	5,305	--	12,030	837	515	269,154	343,279

(Table 21 continued on next page)

(Table 21 continued)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
SOUTHEAST UNIT																
Brown	34	144	5	--	83	116	2,085	2	428	250	--	184	16	*	3,957	4,653
Calumet	1	57	--	--	7	--	18	2	81	43	--	34	3	--	447	490
Columbia	--	22	--	4	1	--	151	32	2,226	1,201	--	127	25	*	4,048	4,567
Dane	--	244	--	21	5	--	26	96	1,224	950	--	116	55	2	2,884	3,028
Dodge	--	210	--	*	--	--	12	32	362	402	--	147	56	*	1,617	1,748
Door	24	51	5	--	18	*	342	5	146	31	--	12	5	1	986	1,186
Fond Du Lac	--	49	--	2	--	--	6	10	153	89	--	14	2	--	494	496
Green	--	21	--	42	--	--	5	18	435	344	--	97	53	*	1,144	1,355
Green Lake	--	9	--	--	2	--	41	7	775	241	--	100	*	2	1,455	1,574
Jefferson	--	161	--	--	--	--	54	45	287	198	--	114	48	--	1,126	1,324
Kenosha	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10
Kewaunee	41	103	--	--	24	14	50	--	154	54	--	23	14	1	911	1,093
Manitowoc	89	256	--	--	115	--	129	3	502	200	--	120	28	--	2,305	2,819
Milwaukee	--	2	--	1	--	--	--	--	3	--	--	--	--	--	6	9
Outagamie	36	156	--	--	27	--	330	19	520	85	--	50	7	1	2,368	2,567
Ozaukee	3	19	--	--	--	--	--	--	81	10	--	14	--	--	278	301
Rock	--	21	3	14	2	--	--	29	201	194	--	6	23	--	523	599
Sheboygan	32	229	--	--	11	*	6	11	833	287	--	123	2	--	2,028	2,111
Walworth	--	18	--	--	2	--	--	5	31	62	--	5	--	--	122	373
Washington	1	25	*	--	*	--	*	2	130	76	--	14	4	--	453	663
Waukesha	--	19	--	3	--	--	3	--	132	64	--	25	*	--	308	574
Winnebago	--	11	--	--	--	--	5	--	350	62	--	69	--	--	684	723
Total	260	1,827	14	86	296	131	3,264	316	9,052	4,843	--	1,395	340	8	28,143	32,265
SOUTHWEST UNIT																
Buffalo	--	47	--	*	259	--	2,390	316	10,986	3,172	--	444	158	1	18,954	19,307
Crawford	--	318	--	98	--	--	250	179	5,860	2,099	--	696	290	1	11,339	11,378
Dunn	--	428	25	--	45	2	1,712	86	3,748	1,382	--	855	143	14	10,861	12,463
Grant	--	271	1	268	250	--	241	80	5,854	3,261	41	705	268	*	12,799	13,905
Iowa	--	86	*	104	--	--	116	110	3,071	1,688	--	213	215	1	6,110	6,651
La Crosse	--	159	--	24	58	--	145	178	4,973	1,453	--	321	107	*	7,825	8,551
Lafayette	--	20	--	22	--	--	1	10	126	186	--	27	1	--	408	417
Pepin	--	35	--	--	17	--	304	14	1,188	450	--	182	15	*	2,538	2,854
Pierce	--	239	1	--	63	--	319	21	1,762	1,285	--	625	137	--	5,686	5,817
Richland	--	416	--	68	--	3	348	193	6,591	3,019	--	769	327	1	14,836	15,148
Sauk	--	228	13	20	--	3	908	433	6,354	2,697	--	545	217	4	13,143	14,643
St. Croix	--	21	1	--	10	--	845	5	1,032	262	--	241	17	--	2,748	3,559
Trempealeau	--	5	*	1	188	--	1,422	224	4,926	1,751	--	211	41	2	9,546	10,501
Vernon	--	513	--	62	44	--	475	200	6,075	3,429	--	1,199	215	2	14,517	14,890
Total	--	2,785	41	665	936	7	9,476	2,051	62,546	26,133	41	7,033	2,151	28	131,310	140,083
State total	1,346	21,785	230	814	1,436	558	333,227	4,517	189,590	57,091	41	41,142	6,212	1,150	856,336	1,051,827

** = less than 500 board feet.*

1/ International 1/4-inch rule.

Rows and columns may not sum due to rounding

Table 22.—Harvest residues generated by industrial roundwood harvesting by Forest Survey Unit, county, and species group, Wisconsin, 1994

(Thousand cubic feet)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
CENTRAL UNIT																
Adams	--	--	--	2	947	335	55	--	--	1,340	45	23	38	*	*	--
Chippewa	2	--	5	1	6	68	40	--	2	122	248	250	110	7	1	*
Clark	*	--	--	*	105	60	60	--	*	227	429	450	192	24	1	--
Eau Claire	*	--	--	7	368	81	16	--	--	473	165	143	81	5	1	--
Jackson	--	--	*	3	1,411	152	104	--	*	1,670	152	103	70	3	8	--
Juneau	*	--	--	--	711	182	78	--	--	971	72	59	21	1	5	--
Marathon	4	--	2	23	46	115	56	*	19	266	580	686	85	55	3	--
Marquette	--	--	--	1	26	164	33	--	--	224	7	15	3	*	1	--
Monroe	--	--	--	*	299	124	127	--	--	550	45	90	13	1	11	--
Portage	*	--	6	2	214	218	104	--	3	547	137	85	29	10	2	--
Waupaca	*	--	--	3	30	198	63	5	2	302	141	186	24	6	6	--
Waushara	--	--	*	3	43	439	60	--	--	545	34	24	7	1	1	--
Wood	*	--	--	1	371	80	57	--	1	510	146	96	36	6	*	--
Total	8	--	13	46	4,578	2,217	854	5	26	7,748	2,200	2,211	709	120	38	*
NORTHEAST UNIT																
Florence	64	--	5	51	72	80	18	3	86	379	237	489	273	60	--	--
Forest	189	--	4	150	51	407	52	3	153	1,009	729	1,537	514	139	*	--
Langlade	138	--	5	46	49	153	17	1	29	438	698	1,279	595	67	2	--
Lincoln	93	--	20	29	68	116	90	--	10	425	362	513	363	27	*	--
Marinette	163	--	14	35	621	537	53	25	24	1,472	442	569	520	63	2	--
Menominee	48	--	4	14	44	70	231	5	402	818	403	669	72	98	4	--
Oconto	27	--	1	13	197	303	52	6	3	602	346	426	451	51	1	--
Oneida	175	--	42	92	246	411	144	1	38	1,150	368	561	793	29	--	--
Shawano	1	--	6	1	9	47	46	29	12	152	155	496	40	17	8	--
Vilas	127	--	12	72	641	285	152	1	10	1,301	337	628	945	42	--	--
Total	1,026	--	114	503	1,998	2,410	855	73	768	7,745	4,078	7,166	4,566	592	17	--
NORTHWEST UNIT																
Ashland	105	--	25	154	60	147	92	1	5	590	341	532	295	56	*	--
Barron	*	--	27	4	32	24	22	--	*	109	191	187	104	2	1	*
Bayfield	44	--	2	45	1,464	957	238	*	1	2,751	302	381	862	35	*	--
Burnett	6	--	*	3	1,082	322	44	--	*	1,457	86	80	92	2	--	--
Douglas	324	--	4	76	1,582	504	29	*	--	2,520	108	67	519	4	--	--
Iron	132	--	3	99	45	37	15	--	15	347	494	830	417	67	--	--
Polk	*	--	--	3	137	43	6	--	--	189	55	95	71	1	*	--
Price	208	--	39	74	27	202	17	1	26	595	423	614	561	46	--	--
Rusk	13	--	20	24	22	35	16	--	9	138	514	760	424	36	1	6
Sawyer	76	--	21	35	113	366	195	--	14	821	599	817	853	85	1	--
Taylor	70	--	11	27	2	14	11	--	22	158	366	367	233	26	1	--
Washburn	22	--	*	7	568	339	13	*	*	949	352	210	278	19	--	2
Total	1,001	--	154	550	5,134	2,992	698	2	93	10,624	3,830	4,939	4,710	376	4	8

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Balsam fir	Red-cedar	Tama-rack	Spruce	Jack pine	Red pine	White pine	N. white-cedar	Hemlock	Total soft-woods	Soft maple	Hard maple	White birch	Yellow birch	Hickory	Hack-berry
SOUTHEAST UNIT																
Brown	--	--	--	--	*	22	10	32	1	64	36	38	4	*	2	--
Calumet	--	--	--	*	--	*	1	2	--	4	6	12	1	*	1	--
Columbia	*	--	--	1	2	48	11	--	--	62	7	11	5	--	5	--
Dane	--	--	--	*	--	10	6	*	--	17	5	7	1	--	7	*
Dodge	--	--	--	2	--	3	8	3	--	16	29	13	*	--	4	*
Door	--	--	--	--	*	4	4	10	*	18	17	11	42	1	1	--
Fond Du Lac	--	--	--	*	*	--	--	--	--	*	10	9	--	--	*	*
Green	--	--	--	1	1	12	14	--	--	27	1	12	*	--	--	--
Green Lake	*	--	--	--	1	9	3	*	*	14	21	9	2	*	2	--
Jefferson	--	--	--	--	39	8	1	--	*	48	9	12	*	--	3	--
Kenosha	--	--	--	--	*	1	--	--	--	1	--	--	--	--	--	--
Kewaunee	--	--	1	--	--	1	4	10	2	18	43	17	5	1	--	--
Manitowoc	--	--	--	*	1	7	22	13	3	46	47	43	4	--	1	*
Milwaukee	--	--	--	--	*	*	--	--	--	1	--	--	--	--	--	--
Outagamie	--	--	*	*	--	9	5	5	1	21	88	36	9	1	1	--
Ozaukee	--	--	--	2	--	1	*	*	--	4	12	6	--	--	--	*
Rock	--	--	--	*	*	8	1	*	--	10	2	1	*	--	--	*
Sheboygan	--	--	--	*	--	1	5	1	--	7	14	37	*	*	*	*
Walworth	--	--	--	--	1	15	11	--	--	27	--	--	--	--	--	--
Washington	*	--	--	9	*	11	8	*	--	29	13	8	1	--	--	1
Waukesha	--	--	--	--	1	18	15	*	--	34	4	3	--	--	--	*
Winnebago	--	--	--	--	3	1	2	--	--	6	9	12	2	*	1	*
Total	1	--	1	17	50	189	132	76	7	473	371	296	77	4	27	2
SOUTHWEST UNIT																
Buffalo	--	--	--	--	*	18	17	--	--	36	70	39	12	*	19	2
Crawford	--	--	--	--	*	4	1	--	--	5	35	104	*	--	24	1
Dunn	--	--	--	4	21	129	14	--	--	168	134	171	38	2	3	--
Grant	--	--	--	--	*	99	8	--	--	107	47	97	*	*	19	6
Iowa	--	--	--	*	*	19	29	--	--	49	11	30	*	--	13	*
La Crosse	--	--	--	*	18	73	12	--	--	103	16	18	6	--	9	1
Lafayette	--	--	--	*	--	*	*	--	--	1	*	1	*	--	*	--
Pepin	--	--	--	2	2	14	15	--	--	33	10	22	2	*	1	--
Pierce	2	--	--	3	3	7	3	--	--	19	7	114	2	--	2	--
Richland	--	--	--	3	4	21	10	--	--	37	36	249	*	--	29	--
Sauk	--	1	--	1	38	102	33	--	--	174	82	87	4	*	22	*
St. Croix	--	1	--	5	26	73	4	--	--	108	7	23	2	--	2	--
Trempealeau	*	--	--	5	8	91	18	--	--	123	36	14	17	6	7	*
Vernon	--	--	--	--	1	13	18	--	--	32	27	184	*	*	22	1
Total	3	2	--	24	122	664	180	--	--	994	520	1,154	84	8	172	11
State total	2,038	2	282	1,139	11,882	8,471	2,718	156	894	27,584	11,000	15,766	10,146	1,099	258	22

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
CENTRAL UNIT																
Adams	--	14	2	--	2	*	128	14	688	125	--	6	3	1	1,089	2,429
Chippewa	*	100	1	--	*	*	1,069	1	457	155	--	130	9	11	2,549	2,672
Clark	1	105	*	--	*	*	1,585	3	665	327	--	91	50	12	3,936	4,163
Eau Claire	--	32	*	--	*	*	595	2	411	155	--	29	4	6	1,632	2,105
Jackson	*	23	*	--	1	*	735	17	852	254	--	27	8	4	2,257	3,927
Juneau	--	30	*	--	--	*	155	9	677	194	--	32	6	1	1,260	2,232
Marathon	6	223	2	1	1	1	1,454	8	534	66	--	298	135	6	4,142	4,408
Marquette	--	2	--	--	--	--	58	*	201	63	--	2	*	*	353	577
Monroe	--	90	--	--	1	--	195	46	1,255	337	--	69	6	*	2,160	2,710
Portage	*	41	*	--	*	*	503	3	403	78	--	47	16	2	1,358	1,905
Waupaca	6	42	1	1	7	*	313	2	314	54	--	55	15	1	1,173	1,475
Waushara	--	8	--	--	2	--	59	*	410	81	--	10	*	1	638	1,183
Wood	*	30	*	--	2	*	535	1	282	82	--	24	4	3	1,246	1,756
Total	14	740	7	2	17	3	7,382	106	7,147	1,970	--	821	258	48	23,793	31,541
NORTHEAST UNIT																
Florence	*	40	*	--	*	26	1,376	2	50	8	--	103	15	7	2,687	3,066
Forest	6	397	2	--	1	30	2,453	33	158	71	--	470	187	28	6,757	7,765
Langlade	4	188	1	1	2	7	2,228	26	279	72	--	390	78	22	5,940	6,378
Lincoln	3	170	*	--	3	3	1,876	6	269	31	--	212	75	34	3,946	4,371
Marinette	5	120	*	--	1	30	2,950	8	357	228	--	181	31	9	5,515	6,987
Menominee	91	76	--	--	*	5	801	40	258	22	--	205	86	13	2,845	3,663
Oconto	2	54	*	--	*	15	1,434	1	227	76	--	80	51	5	3,221	3,822
Oneida	*	148	--	--	6	6	1,995	3	305	47	--	234	19	38	4,551	5,702
Shawano	21	70	2	2	*	*	826	10	292	27	--	127	27	1	2,121	2,273
Vilas	*	74	*	--	2	11	2,611	3	194	41	--	127	13	18	5,047	6,348
Total	133	1,338	6	3	15	133	18,552	132	2,389	622	--	2,130	583	176	42,629	50,374
NORTHWEST UNIT																
Ashland	*	99	--	--	*	*	1,325	4	265	45	--	170	15	18	3,164	3,754
Barron	--	39	2	*	*	*	930	2	438	109	--	68	4	7	2,084	2,192
Bayfield	*	109	1	--	*	*	2,881	2	523	65	--	181	12	13	5,367	8,118
Burnett	--	40	*	--	*	*	1,060	*	220	69	--	27	4	6	1,686	3,144
Douglas	*	69	--	--	--	--	2,058	--	134	18	--	22	3	2	3,005	5,524
Iron	*	157	1	--	2	3	2,501	12	342	38	--	160	15	41	5,081	5,428
Polk	--	27	*	--	*	--	745	*	300	53	--	40	2	2	1,391	1,580
Price	1	201	--	--	3	3	2,563	8	231	37	--	274	48	34	5,047	5,642
Rusk	1	224	4	--	1	1	2,078	4	625	113	--	330	39	30	5,191	5,329
Sawyer	*	242	1	--	*	*	2,581	6	558	74	--	308	28	24	6,177	6,998
Taylor	2	163	*	--	2	2	1,567	*	293	58	--	253	59	18	3,409	3,567
Washburn	3	80	1	--	*	*	2,144	1	389	48	--	69	7	10	3,611	4,560
Total	7	1,450	10	*	10	10	22,431	39	4,318	727	--	1,903	236	204	45,213	55,837

(Table 22 continued on next page)

(Table 22 continued)

Unit and county	Beech	Ash	Butter-nut	Black walnut	Cotton-wood	Balsam poplar	Aspen	Black cherry	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
SOUTHEAST UNIT																
Brown	4	19	1	--	10	46	399	*	44	26	--	39	2	*	673	737
Calumet	*	7	--	--	1	--	2	*	8	5	--	4	*	--	48	53
Columbia	--	3	--	*	*	--	18	4	242	127	--	12	3	*	436	498
Dane	--	31	--	2	1	--	3	12	126	98	--	13	7	*	312	329
Dodge	--	27	--	*	--	--	1	4	37	38	--	17	7	*	178	194
Door	3	7	1	--	1	*	43	1	15	3	--	2	1	*	150	169
Fond Du Lac	--	6	--	*	--	--	1	1	15	9	--	2	*	--	54	54
Green	--	3	--	5	--	--	1	2	47	36	--	12	7	*	125	152
Green Lake	--	1	--	--	*	--	6	1	80	24	--	11	*	*	160	173
Jefferson	--	20	--	--	--	--	3	6	30	21	--	13	6	--	123	170
Kenosha	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Kewaunee	5	14	--	--	2	2	7	--	23	10	--	3	2	*	135	153
Manitowoc	11	32	--	--	15	--	15	*	49	21	--	15	4	--	257	303
Milwaukee	--	0	--	*	--	--	--	--	*	--	--	--	--	--	1	1
Outagamie	5	21	--	--	3	--	49	2	54	9	--	6	1	*	285	305
Ozaukee	*	2	--	--	--	--	--	--	8	1	--	2	--	--	32	36
Rock	--	3	*	2	*	--	--	4	21	20	--	1	3	--	59	68
Sheboygan	4	29	--	--	1	*	1	1	82	30	--	16	*	--	215	221
Walworth	--	2	--	--	*	--	--	1	3	6	--	1	--	--	13	40
Washington	*	3	*	--	*	--	*	*	13	8	--	2	*	--	50	79
Waukesha	--	2	--	*	--	--	*	--	14	7	--	3	*	--	33	68
Winnebago	--	2	--	--	--	--	1	--	37	7	--	6	--	--	77	83
Total	33	236	2	10	36	48	549	41	951	506	--	181	43	2	3,415	3,888
SOUTHWEST UNIT																
Buffalo	--	6	--	*	32	--	342	40	1,135	324	--	54	20	*	2,095	2,131
Crawford	--	40	--	11	--	--	30	23	593	211	--	88	37	*	1,196	1,201
Dunn	--	63	3	--	6	*	274	11	401	138	--	113	19	5	1,380	1,548
Grant	--	35	*	33	32	--	28	10	597	337	5	89	34	*	1,368	1,476
Iowa	--	11	*	11	--	--	14	14	311	174	--	27	27	*	643	692
La Crosse	--	20	--	2	5	--	17	24	497	145	--	38	14	*	813	916
Lafayette	--	3	--	2	--	--	0	1	13	19	--	3	*	--	43	44
Pepin	--	5	--	--	2	--	42	2	121	46	--	21	2	*	277	310
Pierce	--	30	*	--	8	--	44	3	181	132	--	75	17	--	614	633
Richland	--	53	--	7	--	*	38	24	678	308	--	97	41	*	1,561	1,598
Sauk	--	29	2	2	--	*	104	54	662	280	--	69	28	1	1,427	1,602
St. Croix	--	3	*	--	1	--	155	1	106	27	--	29	2	--	357	466
Trempealeau	--	1	*	*	23	--	118	28	512	178	--	22	5	1	969	1,091
Vernon	--	65	--	7	4	--	56	25	613	322	--	146	27	*	1,499	1,531
Total	--	363	5	76	112	1	1,261	259	6,419	2,642	5	871	272	8	14,244	15,238
State total	187	4,127	29	91	191	195	50,175	576	21,225	6,467	5	5,905	1,392	438	129,293	156,877

** = less than 500 cubic feet)*

Rows and columns may not sum due to rounding.

Table 23.--Residue produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Wisconsin, 1994

(In thousand tons, green weight)

Survey Unit and type of use	Wood residue							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
CENTRAL UNIT								
Fiber products	4.33	106.21	2.61	92.64	1.72	13.58	*	1.91
Charcoal	--	2.79	--	--	--	2.79	--	--
Industrial fuel-mill	84.45	108.86	0.09	11.07	84.36	97.79	199.71	244.72
Industrial fuel-sold	1.72	46.75	0.83	17.10	0.89	29.65	0.77	38.93
Domestic fuel	2.44	22.65	2.43	22.44	*	0.21	0.62	5.02
Miscellaneous 3/	15.15	46.06	8.26	6.79	6.89	39.27	9.73	61.33
Not used	3.14	4.60	0.25	1.38	2.89	3.22	6.78	12.92
Total	111.22	337.93	14.48	151.41	96.74	186.51	217.61	364.82
NORTHEAST UNIT								
Fiber products	53.13	209.58	47.43	191.80	5.70	17.77	0.01	0.86
Charcoal	--	3.51	--	--	--	3.51	--	--
Industrial fuel-mill	16.69	98.52	4.93	23.24	11.76	75.29	17.47	158.91
Industrial fuel-sold	4.64	61.18	1.53	26.07	3.11	35.10	3.16	84.19
Domestic fuel	2.73	33.98	2.73	33.26	*	0.72	0.65	3.74
Miscellaneous 3/	4.58	86.48	2.38	27.20	2.20	59.28	5.60	25.85
Not used	1.03	5.31	0.38	3.64	0.65	1.68	0.23	0.77
Total	82.81	498.55	59.38	305.21	23.43	193.34	27.11	274.33
NORTHWEST UNIT								
Fiber products	34.48	82.51	33.86	72.15	0.63	10.36	1.10	4.79
Charcoal	0.11	8.91	0.09	7.81	0.03	1.10	--	0.73
Industrial fuel-mill	10.08	58.09	0.02	13.41	10.07	44.68	12.92	84.08
Industrial fuel-sold	4.20	114.60	2.01	56.10	2.20	58.50	1.97	116.38
Domestic fuel	1.52	15.00	1.52	14.85	0.01	0.15	0.60	3.94
Miscellaneous 3/	1.26	26.05	0.02	0.70	1.24	25.34	0.11	7.22
Not used	2.91	5.10	1.75	2.55	1.16	2.55	0.81	2.07
Total	54.57	310.27	39.25	167.59	15.32	142.68	17.51	219.21
SOUTHEAST UNIT								
Fiber products	3.74	28.92	3.74	28.92	--	--	--	--
Charcoal	--	1.26	--	--	--	1.26	--	--
Industrial fuel-mill	0.01	8.44	0.01	0.27	0.00	8.17	66.79	31.07
Industrial fuel-sold	0.88	6.53	0.03	1.14	0.85	5.38	--	--
Domestic fuel	0.93	8.92	0.93	8.89	0.01	0.03	0.28	2.82
Miscellaneous 3/	5.33	32.18	1.68	11.68	3.65	20.50	3.23	17.72
Not used	0.31	0.49	0.22	0.24	0.09	0.26	0.12	0.27
Total	11.21	86.74	6.61	51.14	4.59	35.60	70.42	51.88
SOUTHWEST UNIT								
Fiber products	2.15	111.79	2.15	111.79	--	--	--	--
Charcoal	--	0.14	--	0.14	--	--	--	0.06
Industrial fuel-mill	1.02	23.17	*	9.92	1.02	13.26	*	7.86
Industrial fuel-sold	0.36	27.85	0.04	5.68	0.33	22.17	0.93	4.32
Domestic fuel	0.83	38.19	0.78	38.17	0.05	0.02	0.07	5.06
Miscellaneous 3/	4.32	80.05	2.39	18.15	1.93	61.90	1.66	61.46
Not used	0.33	14.52	0.24	9.49	0.08	5.03	0.04	3.55
Total	9.01	295.71	5.60	193.33	3.41	102.38	2.70	82.30
STATE TOTAL								
Fiber products	97.84	539.01	89.79	497.30	8.04	41.71	1.11	7.57
Charcoal	0.11	16.61	0.09	7.95	0.03	8.66	--	0.79
Industrial fuel-mill	112.25	297.09	5.05	57.91	107.21	239.18	296.88	526.64
Industrial fuel-sold	11.79	256.91	4.42	106.10	7.37	150.81	6.83	243.81
Domestic fuel	8.46	118.75	8.38	117.61	0.08	1.13	2.22	20.58
Miscellaneous 3/	30.64	270.81	14.74	64.52	15.90	206.30	20.33	173.58
Not used	7.72	30.03	2.85	17.30	4.87	12.74	7.98	19.57
Total	268.81	1,529.20	125.32	868.68	143.49	660.51	335.35	992.55

** = Less than 50 tons.*

1/ Suitable for chipping such as slabs, edgings, veneer cores, etc.

2/ Not suitable for chipping such as sawdust, veneer clippings, etc.

3/ Livestock bedding, mulch, small dimension, and specialty items.

Rows and columns may not sum due to rounding.

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1997. **Wisconsin timber industry—an assessment of timber product output and use, 1994.** Resour. Bull. NC-187. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 73 p.

Industrial roundwood production rose from 357 million cubic feet in 1992 to 378 million cubic feet in 1994. Pulpwood accounted for 65 percent of total roundwood production in Wisconsin—3.1 million cords in 1994. Aspen constituted 37 percent of the roundwood cut for pulpwood. Saw-log production rose from 588 million board feet in 1992 to 645 million board feet in 1994. Principal saw-log species were red oak, aspen, hard maple, white oak, and red pine. Logging residue generated in 1994 was estimated to be 157 million cubic feet. Ninety-eight percent or more of each residue class (coarse, fine, bark) generated at Wisconsin primary mills was used.

KEY WORDS: Pulpwood, saw logs, veneer logs, residue

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.